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Final
Cooperative Management Plan
Environmental Impact Statement

Lower St. Croix National Scenic Riverway
Minnesota • Wisconsin

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Final
Cooperative Management Plan
Environmental Impact Statement
LOWER ST. CROIX

National Scenic Riverway
Minnesota and Wisconsin

This *Final Cooperative Management Plan / Environmental Impact Statement* presents and analyzes six alternatives, including the preferred alternative, for a cooperative management plan for the Lower St. Croix National Scenic Riverway. The purpose of the plan is to provide a general direction for managing the area for the next 15 to 20 years. The Minnesota and Wisconsin Departments of Natural Resources are co-lead agencies with the National Park Service in the preparation of this plan.

Six alternatives for land and water use management were considered. The **preferred alternative** would maintain long stretches of the lower riverway's natural and rural landscape, while allowing limited, planned development in communities that would be consistent with the historic character of the communities; it would protect and enhance the diverse recreational uses found in the riverway. **Alternative A** would also maintain long stretches of the natural and rural landscape; however, a slightly greater proportion of the lower riverway would encompass town landscapes; recreational use would intensify. **Alternative B** would stress maintaining the visual landscape, while maintaining the diversity of water recreational experience. The overall level of recreational use would be allowed to increase slightly, although segments of the river would be designated for specific uses. **Alternative C** would essentially be the same as alternative B, except there would be a freeze on recreational use levels. **Alternative D** would emphasize resource protection, development visible from the river would be reduced even in towns, and recreational use would be reduced. The natural qualities of the riverway would be promoted and restored, with an emphasis on promoting quieter, slower, and less intrusive experiences. **Alternative E,** the no-action alternative, would maintain existing land use and recreational use patterns, following the 1976 *Master Plan* and the Lower St. Croix Management Commission's policy resolutions. Policy resolutions would be used to address new issues that arose.

In general, all alternatives would maintain long stretches of the lower riverway's natural and cultural landscape, and riverway users would continue to find opportunities for a variety of recreational experiences. There would be an overall benefit to natural and cultural resources under the preferred alternative. Riverway user conflicts would be reduced, although there would be more restrictions. Alternative A would provide greater opportunities for more people, but the area would be more crowded and noisier. Impacts on natural and cultural resources would increase. The impacts of alternatives B and C would essentially be the same except that C would limit numbers of people. Alternative D would have the least effect on resources because of its emphasis on resource protection and reduction in recreational use. Under alternative E existing policies and management direction would continue.

In addition to the alternatives, five options were considered for the management structure of the riverway. These options would provide a direction for determining agencies' roles and responsibilities for policy development and land and water use management. The primary difference would be that under the **preferred option** and **option 1** minor adjustments would be made in policy development and land and water use management. Under **options 2 and 3** new management boards for land use management and a water patrol would be established, and the Lower St. Croix Management Commission would be expanded. **Option 4** would continue the existing management structure for policy direction and land and water use management. The impacts vary with regard to administrative responsibilities and cost.

The *Draft Environmental Impact Statement* was available for public review from September 17, 1999 to November 30, 1999; comments and responses on the draft document are reprinted in this final document. The *Final Environmental Impact Statement* has been revised to reflect substantive comments and concerns received during the comment period, and the text has been refined and clarified where necessary. This final document will be on public review for 30 days; if no major comments are received during this period, a record of decision, indicating which alternative has been selected as the approved plan, will be signed. Comments should be addressed to the Superintendent, Lower St. Croix National Scenic Riverway, P.O. Box 728, St. Croix Falls, WI 52024-0708, or call (715) 483-3284, or email SACN_Superintendent@nps.gov.

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SUMMARY

The Lower St. Croix National Scenic Riverway, which extends 52 miles from St. Croix Falls/Taylors Falls to the confluence with the Mississippi River at Prescott/Point Douglas, is jointly managed by the National Park Service (NPS), Minnesota Department of Natural Resources (MDNR), and Wisconsin Department of Natural Resources (WDNR). Many changes have occurred in the St. Croix Valley since the original riverway *Master Plan* was developed by the three managing agencies in 1976. Recognizing that the *Master Plan* was dated, the managing agencies agreed to jointly develop a cooperative management plan for the lower riverway.

The joint plan has been adopted by the federal and state river managing agencies after an adequate analysis of the benefits, environmental impacts, and costs of alternative courses of action and a thorough consideration of public input.

PURPOSE AND SIGNIFICANCE

This Lower St. Croix River *Cooperative Management Plan / Environmental Impact Statement* will provide a general direction for managing the area for the next 15 to 20 years, while meeting the following purposes of the lower riverway:

- Preserve and protect (and restore and enhance where appropriate) the riverway's ecological integrity, its unimpounded condition, its natural and scenic resources, and its significant historic resources
- Accommodate a diverse range of recreational opportunities that do not detract from the exceptional natural, historic, scenic, and aesthetic resources
- Provide an environment that allows the opportunity for peace and solitude
- Provide an opportunity for the education and study of the geologic, historic, ecological, and aesthetic values to further enhance stewardship of the river.

The Lower St. Croix National Scenic Riverway is *significant* for the following reasons:

- The riverway is an exceptional combination of high-quality natural and cultural resources, and scenic, aesthetic, and recreational values.
- These resources and values exist in a distinctive river valley setting with a strong regional identity and character.
- These resources and values exist within the expanding Twin Cities metropolitan area.

These purpose and significance statements cannot be supported by continuing to implement the 1976 *Master Plan*; inadequacies of the current management approach require a new direction.

OUTSTANDINGLY REMARKABLE VALUES

To be eligible for inclusion in the national wild and scenic rivers system a river or its rimmediate environment must possess one or more of the following outstandingly remarkable values: scenic, recreational, geologic, fish and wildlife, historic, cultural, or others that are similar in nature.

The Lower St Croix was designated for its outstandingly remarkable scenic, recreational, and geologic values.

ALTERNATIVES

Alternatives in this plan describe different concepts or visions for the future. A number of common management directions and associated strategies would be implemented under all alternatives. A preferred alternative and four other alternatives for managing land and water in the lower riverway are presented along with a no-action alternative, which describes how the lower riverway is currently managed and would be managed in the future if no changes occurred. A public workshop was held using a caucus/negotiation process to develop the preferred alternative. Most elements of the plan were agreed upon at the caucus, but a few were forwarded to the Lower St. Croix Management Commission for decision.

A set of options, including a preferred option, is also presented that identifies different organizational structures for future management of the lower riverway. Any option could be combined with any land and water use management alternative.

MANAGEMENT DIRECTIONS COMMON TO ALL ALTERNATIVES

Some elements of future riverway management will occur no matter what alternative strategy for management is selected. Topics include government coordination and cooperation, land use management, American Indian treaty rights, riverway stewardship, natural resources management, management of hunting, fishing, and trapping, recreational use management, and interpretation.

LAND AND WATER USE ALTERNATIVES

This *Cooperative Management Plan / Environmental Impact Statement* presents and evaluates six alternatives.

The **preferred alternative** would emphasize protecting and enhancing the riverway's diverse character. It would maintain long stretches of the lower riverway's natural and rural landscape, while allowing limited, planned, development in communities that would be consistent with the historic character of the communities. Riverway users would continue to find opportunities to engage in a wide range of recreational experiences. The emphasis would be on maintaining and enhancing the diverse landscape character and the diverse water-based recreational opportunities.

Alternative A would provide for more development and more recreational activity than the preferred alternative. Managing agencies would seek to maintain long stretches of the lower riverway's natural and rural landscape, while allowing limited, planned development within the boundary that was consistent with the historic character of the riverway's communities. However, under alternative A, a slightly greater proportion of the lower riverway would encompass town landscapes, allowing greater opportunities for development within or adjacent to riverway towns. Additional residential development would also occur in rural areas. Riverway users would continue to find an array of recreational opportunities, including increased opportunities for more social activity on parts of the river, but unlike the preferred alternative, no efforts would be made to regulate user activities if they were not causing significant damage to the resource or posing safety hazards to others.

Alternative B would stress maintaining the current landscape character within the riverway boundary and maintaining the diversity of water recreational experiences as much as possible. However, the overall level of recreational use would be allowed to increase but some use would be reallocated and separated. New development would be more limited than alternative A and slightly more limited than the preferred alternative.

Alternative C would achieve the same conditions as alternative B — views of the lands within the boundary and the diversity of river recreational experiences would be maintained. The major difference from other alternatives would be that the strategy used to maintain the diversity of recreational experience would be to freeze the growth of recreational use.

Alternative D would promote and restore the natural qualities of the lower riverway — the predominance of natural features over modern developments would increase. Natural landscapes would be restored where feasible, and managing agencies would strive to make the landscape appear more natural than it is now. Emphasis would be placed on promoting quieter, slower, and less intrusive experiences that would not disturb others. Overall recreational use would be reduced.

Alternative E, the no-action alternative, provides a baseline for comparing the other alternatives. The managing agencies would continue to manage the lower riverway as they have in the past. The agencies would continue to follow the 1976 *Master Plan* (with some changes based on current management practices) and the Lower St. Croix Management Commission's policy resolution. Management would focus on maintaining existing land use and recreational use patterns and would react to recreational use as they have in the past. Rural residential development would be allowed to a greater degree than all of the alternatives except alternative A. Policy resolution would be used to address new issues that arose.

ENVIRONMENTAL CONSEQUENCES

The potential consequences of the six alternatives on scenic resources, natural resources, cultural resources, recreational use, and the socioeconomic environment were evaluated. In general, the **preferred alternative** would allow limited private development in rural areas and enhanced management of recreational use. Protection of scenic resources would be improved compared to the no-action alternative. Limited localized impacts on natural resources would occur in connection with residential development (e.g., soil and vegetation disturbance and disruption of wildlife), but these impacts would be less than under the no-action alternative. Protection of cultural resources would be improved. Recreational diversity would be enhanced and the resource impacts of recreational use would be reduced compared to the no action alternative. Conflicts between recreational users and landowners would be reduced. There would be negligible impacts on the regional economy.

Alternative A would allow more development in rural areas and increased recreational use. Residential construction would negatively impact scenic resources more than the other alternatives. Limited localized impacts on natural resources would occur in connection with residential development (e.g., soil and vegetation disturbance and disruption of wildlife); these impacts would be more than any other alternative. Protection of cultural resources would be improved compared to the no-action alternative, but not as much as the preferred alternative. Recreational diversity would not be enhanced and the resource impacts of recreational use would be greater than any other alternative. Conflicts between recreational users and landowners would increase. There would be negligible impacts on the economy.

Alternatives B and C would allow slightly less development in rural areas than the preferred alternative. Protection of scenic resources would be improved compared to the no-action alternative and slightly improved compared to the preferred alternative. Limited localized impacts on natural resources would occur in connection with residential development (e.g., soil and vegetation disturbance and disruption of wildlife); these impacts would be similar to but slightly less than the preferred alternative. Protection of cultural resources would be improved compared to the no-action alternative and would be very similar to the preferred alternative. Recreational diversity would be enhanced and the resource impacts of recreational use would be reduced compared to the no-action alternative. Under alternative B there would be limited growth in recreational use, with impacts similar to the preferred alternative. Under alternative C there would be no growth in recreational use, so enhancement of recreational diversity, and the resource impacts of recreational use would be less than the preferred alternative. Conflicts between recreational users and landowners would be reduced, and more so under alternative C. Like alternative A, there would be negligible impacts on the regional economy.

Alternative D would allow less development in rural areas than the other alternatives. Protection of scenic resources would be improved compared to the other alternatives. Limited localized impacts on natural resources would occur in connection with residential development (soil and vegetation disturbance and disruption of wildlife); these impacts would be slightly less than the preferred alternative. Protection of cultural resources would be improved compared to the no-action alternative and would be similar to the preferred alternative. Recreational diversity would be significantly reduced; the resource impacts of recreational use would be reduced compared to all other alternatives. There would be negligible impacts on the regional economy. Some people would feel negative impacts from displaced recreational use, and some landowners would experience negative impacts because of development restrictions.

The no-action alternative, alternative E, would continue to allow development in rural areas in the same way as in the past 24 years. Protection of scenic resources would continue to slowly decline. Limited localized impacts on natural resources would occur in connection with residential development (e.g., soil and vegetation disturbance and disturbance of wildlife); these impacts would be greater than the preferred alternative but less than alternative A. Protection of cultural resources would not improve. Recreational diversity would not be enhanced and resource impacts of recreational use would continue to increase. Conflicts between recreational users and landowners would continue to slowly increase. Like the action alternatives, there would be negligible impacts on the regional economy.

MANAGEMENT STRUCTURE OPTIONS

Five options were developed for the lower riverway management structure. Each one would provide a direction for determining agencies' roles and responsibilities for policy development and land and water use management. In all cases, the state would review and comment on local zoning actions; the two state departments of natural resources and the National Park Service would participate in and provide staff support for the Lower St. Croix Management Commission; the three agencies would provide staff for on-water law enforcement, rescue, and related activities; the Park Service would provide staff for management of lands it owns north of Stillwater.

The **preferred option** would retain the management commission and include an additional nonvoting member from the newly created partnership team that would serve an advisory role. The Minnesota-Wisconsin Boundary Area Commission would continue in its administrative support and nonvoting advisory roles. Managing agencies would have no veto authority over a local government's decision on a conditional use permit, or subdivision; if there was disagreement, appeals could be made to the courts. Existing water use enforcement roles would continue. **Option 1** would also retain the management commission but would include a local government representative. The planning task force would be restructured and made permanent. It would assist in rules interpretation, mediation, and coordination for land management and/or water use management. **Options 2 and 3** would further expand the management commission and create a water patrol. **Option 2** would create a joint powers board for land use management, whereas **option 3** would create a riverway board to manage land use. **Option 4** would continue the existing management structure for policy direction and land and water use.

IMPACTS OF MANAGEMENT STRUCTURE OPTIONS

The preferred option would create the least change from the current management approach. Option 1 would involve a minor change. Options 2 and 3 would involve the most change, with each establishing a new management board. There would be no change from the current management approach under option 4.

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Context for the Plan

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INTRODUCTION

PURPOSE OF AND NEED FOR THE COOPERATIVE MANAGEMENT PLAN

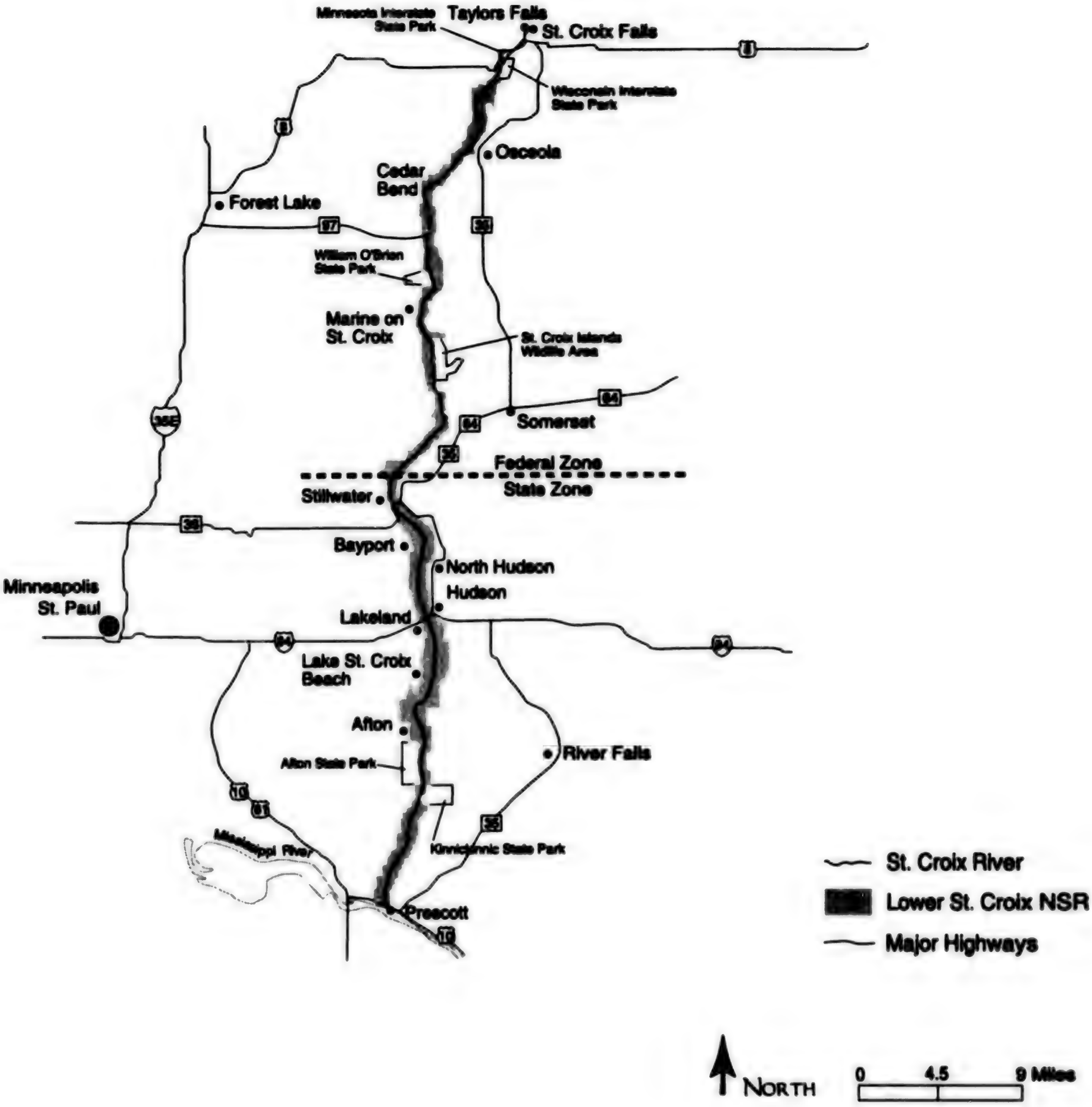
In 1976 the National Park Service (NPS), in cooperation with the Minnesota and Wisconsin Departments of Natural Resources (DNR), completed a *Master Plan* for managing the lower riverway. The overall goal of the plan was to "preserve the existing scenic and recreational resources of the Lower St. Croix through controlled development." The plan focused on establishing the riverway, such as determining the riverway boundary, acquiring land, and identifying needed administrative and recreational facilities.

Many changes have occurred in the St. Croix Valley since 1976. For example, use of the riverway has increased, and people are using it in increasingly diverse ways. The first *Master Plan* focused on land acquisition and startup of the riverway. Today's managers are concerned with resolving conflicts between different users and addressing the impacts of changing adjacent land uses on the lower riverway. The old plan needs to be updated to prepare for these changes, to take a new look at management of the riverway, and to address problems and opportunities that were not apparent 24 years ago.

The National Park Service and the Minnesota and Wisconsin DNRs have prepared this *Final Cooperative Management Plan / Environmental Impact Statement* for the Lower St. Croix River. The plan was developed in cooperation with the Lower St. Croix Planning Task Force, which is comprised of interested citizens, agency staff, and other riverway stakeholders. The purpose of this plan is to describe the direction the managing agencies intend to follow in managing the lower riverway for the next 15 to 20 years while meeting the riverway's stated purposes. This cooperative management plan is consistent with the requirements of the national wild and scenic river act, the two state's Lower St. Croix acts, and will serve as the general management plan as required by the National Parks and Recreation Act of 1978.

The plan considers the riverway holistically, in its full ecological and cultural contexts — as a unit of the national wild and scenic rivers system and as a part of the surrounding watershed. The plan will serve as a management tool to guide decision-making over the long term; it will not provide specific and detailed answers to every issue or question. However, the plan will provide a management framework that will help maintain a balance between continuity and adaptability in a dynamic decision-making process.

This *Final Cooperative Management Plan / Environmental Impact Statement* presents six alternatives for managing the riverway and analyzes the environmental impacts of each. A no-action alternative (a continuation of existing trends) is provided as a basis of comparison. The approved plan will provide a framework for proactive decision making, including decisions on recreational use, land use, natural and cultural resource management, and general development in the lower riverway.



REGION

Lower St. Croix National Scenic Riverway
Minnesota · Wisconsin

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BRIEF DESCRIPTION OF THE LOWER RIVERWAY

In 1972 Congress added the Lower St. Croix River (see the Region map) to the national wild and scenic rivers system (Public Law 92-560, see appendix C). This cooperative management plan addresses only the lower riverway (see "Relationship to Other Planning Efforts to This Plan" section).

On September 19, 1975 the original boundary for the entire riverway was published, consistent with the requirements of section 3(b) of the National Wild and Scenic Rivers Act. In March 1977 all islands under the jurisdiction of the Bureau of Land Management were withdrawn from entry, pursuant to a 1968 letter signed by the secretary of interior, and on August 6, 1986, they were transferred to the National Park Service. Additions and deletions were made in 1983, creating a net increase of 82 acres. In March of 1990 a boundary change was made in Prescott (Pierce County), Wisconsin. Legal descriptions are available from the managing agencies.

The Lower St. Croix Riverway is a narrow corridor that runs for 52 miles along the boundary of Minnesota and Wisconsin, from St. Croix Falls/Taylors Falls to the confluence with the Mississippi River at Prescott/Point Douglas. Although the riverway has a natural appearance for long stretches, much of the riverway is adjacent to the rapidly growing Twin Cities metropolitan area. Municipalities along the riverway include St. Croix Falls, Taylors Falls, Osceola, Marine on St. Croix, Stillwater, Oak Park Heights, Bayport, North Hudson, Hudson, Lakeland, Lakeland Shores, Lake St. Croix Beach, St. Mary's Point, Afton, and Prescott. The St. Croix passes through various landscapes — from a deep, narrow gorge with basalt cliffs to expansive views of a wide river valley — and includes diverse biological communities. The riverway's scenery, plentiful fish and wildlife, largely unpolluted, free-flowing character, numerous access points, and closeness to the Twin Cities attract many people in the late spring, summer, and fall. Users participate in a wide range of recreational activities in the lower riverway, including motorboating, sailing, canoeing, swimming, camping, picnicking, wildlife viewing, fishing, and hunting.

The authorized boundary for the Lower St. Croix National Scenic Riverway encompasses approximately 25,346 acres of land and water (see Boundary map on page 7). The National Park Service manages the upper 27 miles of lands and waters (approximately 9,542 acres — referred to as the federally administered zone) under fee simple ownership or as conservation, riverfront, and scenic easements. The law requires that the lower 25 miles of the lower riverway (referred to as state-administered zone) be administered by the states of Minnesota and Wisconsin, and that development planning for the riverway be conducted jointly by the states and the secretary of the interior.

While the National Park Service's land acquisition authority is limited to the federally administered zone (north of Stillwater), the Park Service does have some management responsibilities in the state-administered zone (Stillwater south). Similarly the states have land management authority over private lands throughout the riverway (both north and south of Stillwater). The National Park Service and the states all have management responsibility over water surface use north of Stillwater, while the states have management responsibility from Stillwater south. The three agencies, as well as other state and federal agencies, share many other natural resource management responsibilities.

As of June 1997, approximately 15,804 acres of land and water were in the state-administered zone. Much of the land along the lower 25 miles is in private ownership. The two states have several scenic easements on land within the riverway, (202 acres in Wisconsin and 80 acres in Minnesota), and the state of Minnesota owns land for a public boat access. Several Wisconsin and Minnesota state parks and a Wisconsin wildlife management area also are adjacent to the riverway boundary.

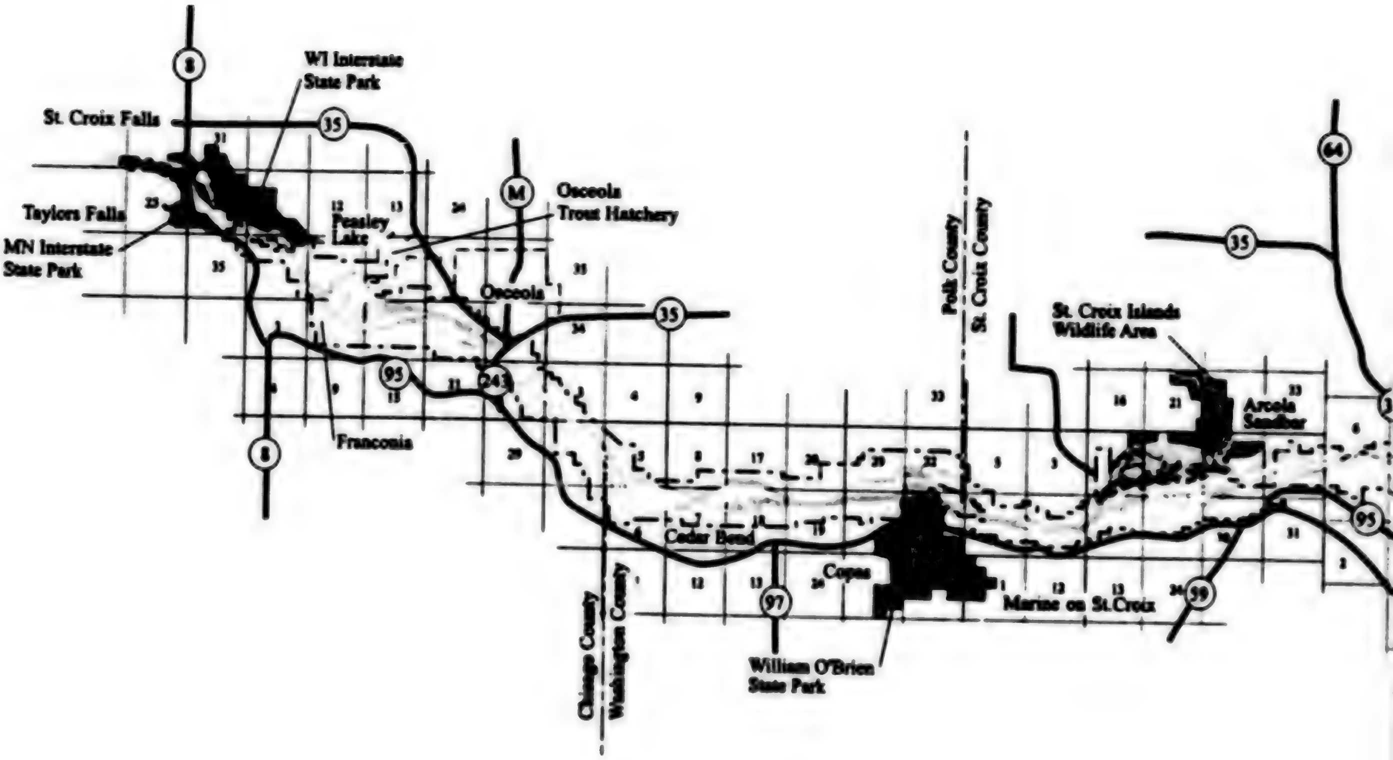
LEGISLATIVE PURPOSES FOR ESTABLISHING THE LOWER ST. CROIX

By the 1950s decades of damming, development, and diversion had taken their toll on our country's rivers. During the 1960s, the country began to recognize the damage we were inflicting. Recognition led to action by Congress to preserve the beauty and free-flowing nature of some of our most precious waterways. In 1968 Congress passed and President Lyndon Johnson signed into law the Wild and Scenic Rivers Act. The purpose of the Wild and Scenic Rivers Act is to protect and enhance the free-flowing character, water quality, and immediate environment of certain rivers. To be eligible for designation a river must be free flowing and must possess one or more outstandingly remarkable resource values (i.e., scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value). The Lower St. Croix was found eligible by a Department of Interior study of 1972 for its outstanding scenic, recreational, and geologic values.

The Congressional Record of October 1972, which led to the designation of the Lower St. Croix, provides more insight into the purposes for establishing the Lower St. Croix. It contains numerous references to the uniqueness of the Lower St. Croix. Senator Henry Jackson said:

> "I should point out that this is one of the last remaining major rivers in the United States which lies within a major metropolitan area and is still relatively unspoiled. The river borders the eastern boundary of the Minneapolis-St. Paul urban area and is within easy access of over 2 million people. Ironically, it is this accessibility which places in jeopardy the features which make this river an outstanding natural resource, and which makes it imperative that the river quickly receive protection under the Wild and Scenic Rivers Act. . . . Final action on the St. Croix bill is urgently needed. If comprehensive protection is not extended to the riverway, the St. Croix will eventually become one more city river, its waters poisoned with pollution, its shorelines gutted with indiscriminate development."

While many today refer to the Lower St. Croix as a "metro river," in planning for its future management, it is important to remember that Congress established it specifically to keep it from becoming just "one more city river."


WI Interstate State Park
St. Croix Falls
Taylors Falls
MN Interstate State Park
Peasley Lake
Osceola Trout Hatchery
Osceola
Franconia
Polk County
St. Croix County
St. Croix Islands Wildlife Area
Arcola Sandbar
Cedar Bend
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Chisago County
Washington County
William O'Brien State Park
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8
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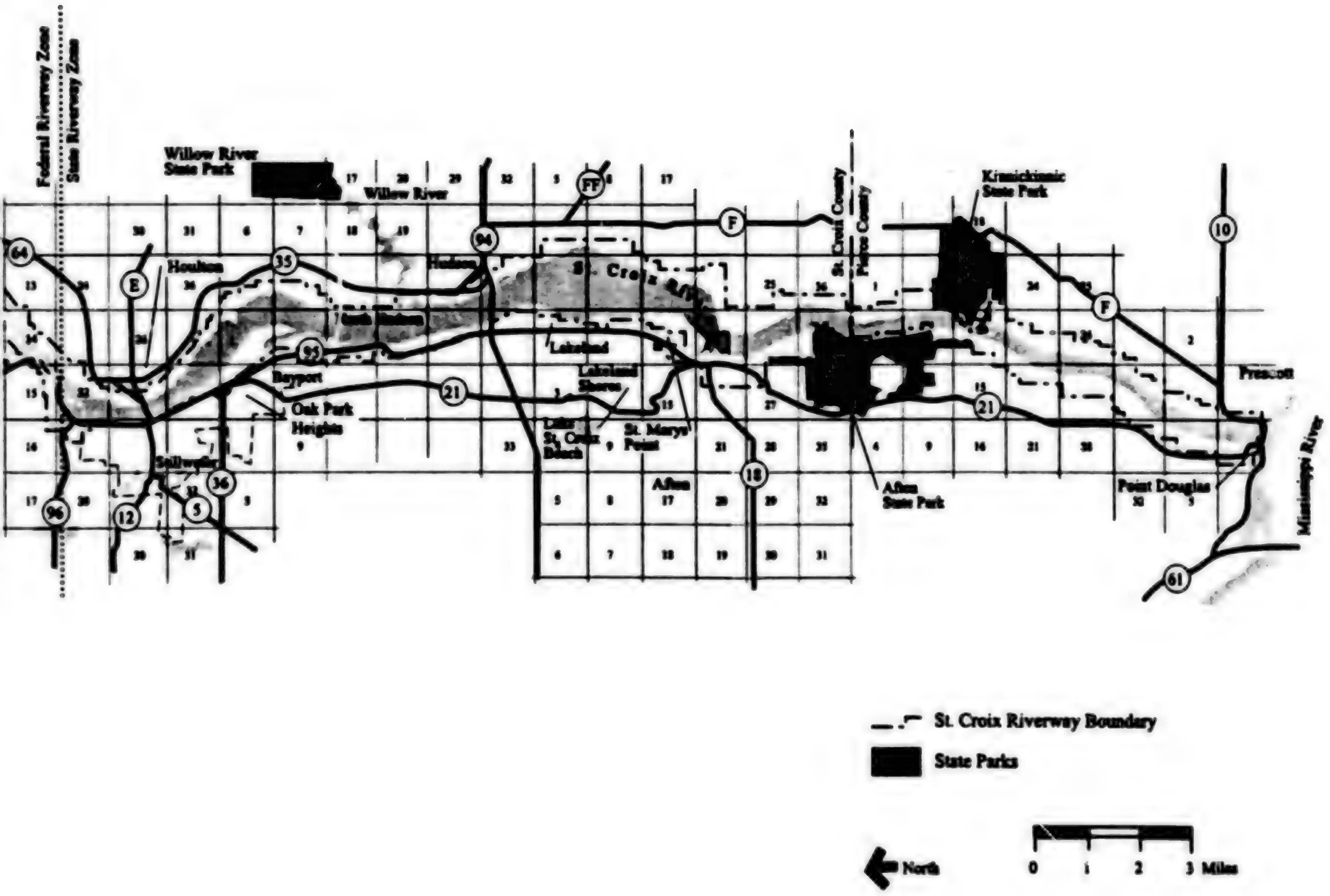

Boundary

Lower St. Croix National Scenic Riverway
United States Department of the Interior / National Park Service

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DSC | May 2000

FUNDAMENTAL PRINCIPLES FOR THE COOPERATIVE MANAGEMENT PLAN

Classification and Outstandingly Remarkable Values

Classification. Rivers designated under the National Wild and Scenic Rivers Act are classified as "wild," "scenic," or "recreational," depending on the extent of development and accessibility along each segment of river. Wild rivers are generally inaccessible except by trail; scenic rivers are largely undeveloped, but are accessible in places by road; and recreational rivers are readily accessible by road. The upper 10 miles of the Lower St. Croix are classified as scenic, whereas the lower 42 miles are classified as recreational.

Rivers classified as recreational are often mistakenly thought to be somehow less deserving of protection than those classified as scenic or wild. The classification of a river is not intended to imply any management intent. For instance, a classification as recreational does not mean that the river must be managed or developed specifically for recreational activities. All rivers are managed to protect and enhance the values that caused them to be eligible for inclusion in the national wild and scenic rivers system, regardless of their classification.

Classification is important only in that development and accessibility should not be allowed to increase to such an extent that a river's classification would change. In other words, development that would change a river's classification from wild to scenic or from scenic to recreational should not be allowed. However, while it may be unlikely, there is no similar prohibition against removing development to change a river's classification from recreational to scenic or from scenic to wild.

Outstandingly Remarkable Values. Classification is often confused with outstandingly remarkable values. To be eligible for inclusion in the National Wild and Scenic Rivers System a river or its immediate environment must possess one or more of the following outstandingly remarkable values: scenic, recreational, geologic, fish and wildlife, historic, cultural, or others that are similar in nature. A river classified as scenic may or may not include scenery as an outstandingly remarkable value, and a river classified as recreational may or may not include recreation as an outstandingly remarkable value.

The Lower St. Croix was designated for its outstandingly remarkable scenic, recreational, and geologic values. Section 7(a) of the Wild and Scenic Rivers Act provides substantial protection to designated rivers. It states that:

> "no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration."

The National Park Service is responsible for evaluating water resource projects proposed on the Lower St. Croix according to the provisions of section 7. Water resources projects are those that involve alterations to the bed or banks of the river and include bank stabilization projects, bridges, and docking facilities. Most require permits from the U.S. Army Corps of Engineers or U.S. Coast Guard.

The National Park Service and other agencies manage the Lower St. Croix to protect and enhance all its important resource values. Because of the wording of section 7(a), in evaluating the impacts of a project, the primary concern of the Park Service will be the potential impact of a project on the values for which the Lower St. Croix was designated – its scenic, recreational, and geologic values.

Several other key elements also form the foundation for this plan, including the purposes of the lower riverway, its significance and exceptional resources and values, and the vision or goal for the lower riverway. These elements set the direction and limits for the plan and are basic to all assumptions about how the riverway should be used and managed, beginning with the following principles:

1. **The riverway must be managed cooperatively.** There must be a framework for federal, state, and local cooperative management.
2. **The river cannot be taken out of its watershed.** While the riverway as a management entity is contained within a narrow corridor, it is profoundly influenced by activities in the larger watershed. Therefore, it is important to realize that this plan is being developed in conjunction with a companion *Watershed Stewardship Initiative*.

PURPOSES, SIGNIFICANCE, AND EXCEPTIONAL RESOURCES/ VALUES OF THE LOWER RIVERWAY

The purposes, significance, and exceptional resources/values of the lower riverway are three of the key elements that shaped the development of this cooperative management plan. These reaffirm the previously identified outstandingly remarkable values. The ***purposes*** tell why the Lower St. Croix was set aside as a unit in the national wild and scenic rivers system. The ***significance*** of the lower riverway addresses what makes the area special — why it is important to our natural and/or cultural heritage and how it differs from other rivers in the country. The lower riverway's ***exceptional resources / values*** further elaborate why the Lower St. Croix is significant. All of the alternatives and management prescriptions in this management plan should be consistent with and support the lower riverway's purposes and significance.

Based on the above fundamental principles and the lower riverway's enabling legislation, legislative history, management agency policies, public input, and the knowledge and insights of the public, the following purpose and significance statements and exceptional resources/values were identified for the Lower St. Croix National Scenic Riverway.

The ***purposes*** of the Lower St. Croix National Scenic Riverway are to

- Preserve and protect (and restore and enhance where appropriate) for present and future generations the lower riverway's ecological integrity, its natural and scenic resources, and its significant cultural resources.

- Accommodate a diverse range of recreational opportunities that do not detract from the exceptional natural, cultural, scenic, and aesthetic resources.
- Provide an environment that allows the opportunity for peace and solitude.
- Provide an opportunity for the education and study of the geologic, cultural, ecological, and aesthetic values to further enhance stewardship of the river.

The Lower St. Croix National Scenic Riverway is ***significant*** for the following reasons:

- The riverway is an exceptional combination of high-quality natural and cultural resources, and scenic, aesthetic, and recreational values.
- These resources and values exist in a distinctive river valley setting with a strong regional identity and character.
- These resources and values exist within the expanding Twin Cities metropolitan area.

The Lower St. Croix National Scenic Riverway contains the following **exceptional resources and values:**

- The valley's varied cultural resources reflect its significant role over thousands of years as a river transportation corridor.
- The values of the Minnesota and Wisconsin communities provide a broad constituency for the management and preservation of the Lower St. Croix Riverway.
- The 52 miles of the Lower St. Croix River is at the junction of three major biomes: conifer-hardwood forest, deciduous forest-woodland, and the prairie. The river has high water quality from a myriad of sources in the watershed.
- The juxtaposition of landforms and geologic features, including the bluffs, islands, the Dalles, and Lake St. Croix, are unique.
- Towns along the river corridor retain their historic small town character.
- The diversity of scenic, geologic, economic, cultural, recreational, and exceptional natural resources combine to make the Lower St. Croix River an outstanding and accessible resource for the Upper Midwest.
- The natural communities, both terrestrial and aquatic, are diverse and of high quality. The sloughs, backwaters, braided streams, and other river features provide habitat for native plants and animals. Rare and endangered plants and animals, including mussels, eagles, and others, thrive here. The river corridor is an important flyway for migrating birds and contains an exceptionally diverse fishery.
- The exceptional characteristics and diversity of the linear riverway provide for a wide variety of high-quality recreational experiences. People can easily find opportunities, ranging from peace and solitude to dynamic social interaction.

VISION FOR THE LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

Based on the lower riverway's purposes and significance, and the desired conditions for the riverway voiced by the public, a common vision or goal was agreed upon for the managing agencies to strive to achieve in the future. This vision, highlighted in the box below, describes the overall riverway resource conditions, recreational experiences, land and water uses.

Each action alternative describes different paths that strive to achieve this common vision.

VISION

The Lower St. Croix National Scenic Riverway continues to be an important natural protected corridor for people to use and enjoy. The riverway maintains a diversity of scenic, natural, and cultural resources while also preserving rural and small town qualities. The riverway's unpolluted waters accommodate diverse recreational and living experiences, ranging from quiet solitude to highly social, motorized uses. This is an area of minimal conflicts, with riverway users, landowners, and managers working together and respecting each other. Coordinated and cooperative management of the riverway stresses and exemplifies stewardship.

THE PLANNING PROCESS

Planning for the lower riverway began in the winter of 1995-96. The *Cooperative Management Plan / Environmental Impact Statement* was developed through a collaborative effort, involving all interests that have a stake in the management of the lower riverway. With input from the public, the plan was prepared by an interagency planning team consisting of employees from the Minnesota and Wisconsin Departments of Natural Resources, National Park Service, and the Minnesota-Wisconsin Boundary Area Commission.

The Lower St. Croix Planning Task Force played a key role in completing this plan. The task force was established in 1996 to guide development of the cooperative management plan, facilitate participation of the riverway stakeholders in the planning process, provide feedback on the three riverway managing agencies' work, and help build stakeholder consensus on the future management of the lower riverway. Membership of the task force was open throughout the planning process to all interested citizens.

Interested members of the public, citizens representing boaters, businesses, landowners, environmental groups, local governments, and various other interests, and staff of the riverway managing agencies served on the volunteer task force. From February 1996 through August 1998, 53 meetings were held to work on the plan. These meetings covered a host of topics, including the riverway's biotic, geologic, and cultural resources, recreation issues, local riverway zoning, river crossings, vegetation management, interpretation, winter recreation, island management, riverway administration, commercial navigation, boundary adjustments, and management structure. The meetings focused on issues facing the lower riverway; its purposes, significance, and exceptional resources; the development and refinement of the land use and water use alternatives in the plan; different options for the lower riverway management structure; guidelines for revisions to the states' land and water use regulations;

and on the interagency planning team's work.

The first major step in the planning process was to collect data and identify goals for the lower riverway. The planning process reaffirmed the purposes, identified the significance and exceptional resources/ values, examined desired futures, developed a vision statement, determined issues and concerns that need to be addressed in the plan, and identified planning mandates and constraints. Data on the lower riverway's resources, users, and the socioeconomic environment were also collected and analyzed.

A set of options was developed on the organizational structure for managing the lower riverway and a preferred option identified, and guidelines were established for use by the states of Minnesota and Wisconsin to revise their land and water use regulations within the lower riverway's boundaries.

After the alternatives were completed, the environmental consequences and implications of each alternative were analyzed. Then all of the above information, including the land and water use alternatives, management structure options, environmental impact analysis, and the state guidelines, was incorporated into this *Final Cooperative Management Plan / Environmental Impact Statement*.

Because of the complex makeup of the lower riverway, which traverses or abuts five state parks, one state wildlife management area, five counties, 15 incorporated communities, and 35 townships, and the diverse publics interested in the future of the riverway, public involvement was an important aspect throughout the planning process. The task force was one conduit by which the public could participate in the planning process. Additional opportunities also were provided to the public to give their views on the lower riverway's purposes and significance, exceptional resource values, vision, issues and concerns, desired future conditions, and the preliminary management alternatives. Newsletters, workbooks, and media articles were the primary means relied on to communicate with the general public. A mailing list of about 720 individuals and groups was developed during the course of the project. Newsletters were mailed out in November and May 1996, and an alternatives workbook was mailed to the public in April 1997. Additional workbooks were mailed out to the public in April and May of 1998 for workshops on the selection of the preferred alternative, management structure, and on the guidelines for state regulations. Meetings were also held with local units of government, user groups, and other interested organizations to discuss the alternatives. (See the "Consultation and Coordination" section for more information about public involvement to date.)

PLANNING ISSUES AND CONCERNS

Several major issues were identified that form the focus of this *Cooperative Management Plan*. All have the potential to impact important natural and cultural resources. Some of these issues and concerns will not be fully resolved in this management plan, but the plan will establish a framework to resolve them in the future. Certain issues and concerns will be addressed in more detail in the St. Croix *Watershed Stewardship Initiative* or as part of the interagency St. Croix Basin *Water Resources Management Plan*.

PLANNING ASSUMPTIONS

There are 13 fundamental assumptions that underpin the plan for the Lower St. Croix. These assumptions are considered to be "givens," which will hold regardless of how the lower riverway is managed in the future.

- The region will continue to urbanize and the regional population will continue to increase.
- The values of people living along the lower riverway are changing as new people move into the area.
- User demand will increase.
- The potential for resource degradation will increase.
- The enabling legislation will not change.
- Planning will be grounded on the lower riverway's purposes, significance, and exceptional resources.
- The management agency missions will not change.
- State lands along the lower riverway will be managed in a manner consistent with the cooperative management plan.
- Management areas will be applied to all lands and waters within the riverway boundary.
- Numerous variables such as floods affecting the Lower St. Croix are not under the control of the riverway managing agencies.
- The lower riverway will be managed in manner that provides as safe a condition as possible.
- The cooperative management plan will not solve all conflicts between user groups and between riparian landowners and user groups.
- Changes in statutes, rules, and policies will be pursued to implement the plan.

Conflicts Between Boaters

Boaters seeking different types of experiences and engaged in different activities create conflicts along the riverway. These conflicts present management issues related to watercraft noise, horsepower, speed, type, and access from the Mississippi River; opportunities for solitude versus social experiences; boat wakes; angling; safety; special events (including large-group events); and the availability of boater facilities (such as accesses, waysides, beaches, campsites, private docks, moorings, and sanitary facilities).

Conflicts Between River Users and Riparian Landowners

Riparian landowners routinely express displeasure with the behavior of some boaters. For example, some landowners complain that boaters trespass and litter on their property, and that boat wakes create erosion of the shoreline. They feel the riverway is being managed in favor of boaters. Boaters, on the other hand, wish to continue recreational use of the river and are concerned about excessive restrictions.

Impacts of Changing Land Uses

The landscape along the lower riverway and in adjacent areas is undergoing rapid change in response to regional population growth, increasing urbanization, and changing land use patterns. The population residing in the five counties along the lower riverway increased from approximately 189,800 people in 1970 to 361,600 people in 1995 (Bureau of Economic Analysis, Economic & Statistics Administration 1997; CD Rom disk). The number of structures documented within the riverway's legal boundaries increased from an estimated 1,900 in 1973 to 2,225 in 1991, with about 82% of the new structures added in the state-administered zone (Minnesota-Wisconsin Boundary Area Commission 1993). The acreage of urban land in the counties doubled from 1973 to 1991, taking place primarily in western St. Croix County and eastern Washington County (Minnesota-Wisconsin Boundary Area Commission 1994). All of these changes are affecting the riverway's natural and cultural resources, scenic quality, cultural character, and recreational experiences.

Inconsistencies in the Application and Enforcement of Zoning Standards and Regulations

All county and municipal governments along the Lower St. Croix have adopted riverway zoning ordinances. However, there are different zoning standards for municipal and rural areas in both Minnesota and Wisconsin. Confusion and misunderstandings have resulted from unclear, subjective language in the ordinances. Complicating the situation further, the two state departments of natural resources have veto power over local riverway zoning decisions. Landowners are upset that the ordinances appear to be inconsistently applied and enforced by the local governments and departments of natural resources. Landowners sometimes get mixed messages about what they can and cannot do on their property. On the other hand, local governments have problems trying to interpret the intent of the ordinances and rules and in dealing with variance requests for improvements to existing developments.

Impacts on Water Quality and Quantity

Although the lower riverway's water quality today is generally considered to be good, differences in water quality standards, designations, and policies between Minnesota and Wisconsin could lead to inconsistencies in protection of the riverway's water quality. There are concerns about pollution entering the riverway from sources outside the boundary. Runoff from agricultural lands, roads, urban areas, and groundwater contamination from septic systems are all potential pollution sources that may be affecting the lower riverway's tributaries. In addition, discharges from municipal and industrial wastewater facilities may be affecting the riverway's water quality. As a result of increasing nutrients in the riverway, Lake St. Croix and the riverway's backwaters are beginning to show signs of eutrophication (increased algae blooms, and unpleasant odors). Fish also have been contaminated with polychlorinated biphenyls (PCBs) and several organic compounds, which has resulted in the states of Minnesota and Wisconsin issuing fish consumption advisories for the St. Croix. As the population and developments continue to increase near the river and its tributaries, the potential for degradation of the riverway's water quality will increase. Another concern is low water releases from operation of the St. Croix Falls dam in the winter. Low flows could jeopardize mussel and fish populations by dewatering part of their habitat.

Potential Loss of Native Mussel Species

The St. Croix River has one of the richest freshwater mussel communities in the world. The segment of the lower riverway from the Northern States Power dam at St. Croix Falls/Taylor Falls (NSP dam) to Osceola has especially high-quality mussel habitat, as does the Hudson Narrows. However, native mussel species — including two federally endangered and many stated listed species — are threatened by water pollutants, sedimentation, the spread of the zebra mussels, loss of habitat, direct human impacts, and fluctuation of water flows caused by hydropower peaking operations.

Effects of Recreational Use on Natural Resources

Islands and shorelines are being eroded; vegetation is being trampled at landings, campsites, and popular day use areas; and human wastes are being deposited in the river. If recreational use continues to increase, other resources impacts are likely to increase, altering the riverway's soils, vegetation, wildlife, and water quality in localized areas.

Effects of Recreational Use on the Islands

For the past several generations, people have used the islands in the lower riverway for camping and picnicking. People beach their boats on the shoreline of the islands and set up camp. Without designated camping sites, these campers use most of the available space. As a result, ground vegetation is minimal or nonexistent, littering is common, and wastes have been left indiscriminately on the islands. Conditions have deteriorated to the point that some users have been displaced and riparian landowners have made complaints.

Need for Concessions Management

The number of people using outfitters on the lower riverway is increasing, and these operations have the potential to significantly affect the experience of visitors on the riverway and its resources (e.g., crowding, noise, bank erosion, and sanitation problems). Therefore, managing agencies will continue to monitor and regulate these operations as required to protect these values.

Spread of Exotic Species

Although there is insufficient information regarding the distribution and abundance of nonnative or exotic species, they are found along the lower riverway. In 1985 more than 80 exotic plant species were listed for the riverway, including purple loosestrife, spotted knapweed, and reed canary grass (NPS 1985). The riverway's native species are being adversely affected by these species. Another species of concern, the zebra mussel, has not yet spread through the lower riverway but zebra mussels have been found on boats entering the lower riverway and on boats harbored on the St. Croix.

Loss and Fragmentation of Native Plant Communities

Although remnants of all of the native plant communities still exist on the lower riverway and the vegetation appears to be "natural," the plant communities are continuing to be affected by people. Management practices along the riverway, grazing, use of fire and suppression of wildfires, clearing for agriculture and development, the introduction of exotic species, natural plant succession, and diseases (e.g., white pine blister rust, and oak wilt) and insects (e.g., gypsy moth) are altering the native plant communities in varying degrees. The prairie and oak savanna communities along the lower riverway have been the most severely affected by people.

Lack of Information on Natural and Cultural Resources

Many resources of the lower riverway have not been inventoried and evaluated. Baseline data on many biological resources, including current biological characteristics and trends, is lacking. A lack of knowledge of the St. Croix fishery, for example, limits understanding of potential impacts to the fishery. Most of the riverway's natural resources are not being monitored. Some basic cultural resource data, such as information on archeological sites and on cultural landscapes, is still lacking. Native American burial sites also are not known and frequently are not protected from development. Without this basic natural and cultural resource information, the managing agencies will not be aware of significant resources in the riverway, impacts that are occurring to those resources, or management strategies needed to protect and maintain these resources.

Lack of Cultural Resource Management

Cultural resource management has been a lower priority than management of natural resources. As a result, there is the potential for the degradation and loss of cultural resources and a loss in the opportunity to interpret the riverway's resources for users.

Impacts of New River Crossings

The Lower St. Croix is on the edge of the rapidly growing Twin Cities metropolitan area. Growth is occurring on both sides of the riverway. With the riverway's north-south alignment, there will be continued pressure for people, commodities, communications systems, and energy systems to cross the riverway. These various types of crossings potentially can affect the riverway's resources, although to different degrees. Proposals to build or expand highway or railroad bridges can significantly impact the riverway's scenic quality. Construction of submarine crossings can affect aquatic resources. Utility lines have a visual impact, and right-of-way maintenance for crossings such as pipelines can impact resources. A lack of coordination among the companies and agencies proposing projects, regulatory agencies, and riverway managing agencies also encourages crossings to proliferate and compounds the potential for impacts.

Access to the Riverway

There are differing views as to whether boat access to the lower riverway is adequate. Some argue that increased boat access (e.g., more access points and marinas) is needed so more people can enjoy the riverway. Others argue that boat access needs to be reduced to decrease crowding and resource impacts and to provide opportunities for experiences that are rapidly disappearing in the region (e.g., quality fishing, quiet, and solitude).

Navigation Channel Maintenance

Congress authorized the U.S. Army Corps of Engineers to maintain a 9-foot navigation channel from the confluence with the Mississippi River to Stillwater, and a 3-foot navigation channel up to the NSP dam. However, the Corps has not maintained the 3-foot channel for many years. Channel maintenance plans for the 9-foot channel assume only the Kinnickinnic Narrows will require dredging in the next 40 years. The operation and maintenance of these channels can impact, and be impacted by, resource management strategies, recreational use characteristics, aesthetics, recreational boater safety, and aquatic resources. For example, if the 9-foot channel is not periodically dredged in places, eventually some commercial users would not be able to use the Lower St. Croix. On the other hand, if the 3-foot channel was maintained, it would provide easier motorboat access.

Perceived Lack of Enforcement

Five county sheriff departments, two state departments of natural resources, and the National Park Service all provide on-water enforcement. However, there is uneven enforcement, and uneven enforcement capabilities, between all the agencies. Although there have been and are still efforts underway, there is a perception that on-water law enforcement is poorly coordinated among the agencies, leading to gaps in enforcement coverage at times, duplication of enforcement coverage at other times, and inconsistencies in enforcement.

Inconsistencies in Regulation of Recreational Uses

Users have complained about inconsistencies in the way in which the National Park Service and the Wisconsin and Minnesota Departments of Natural Resources regulate boating, fishing, hunting, and trapping in the riverway. For example, watercraft noise laws are slightly different in the two states and are difficult to enforce. In Minnesota, the counties have veto power over state water-surface use regulations, which also has the potential to lead to inconsistencies.

Lack of Coordination

There is a need for better coordination, communication, and cooperation, and integrated management and planning between the riverway managing agencies and the federal, state, and local governments. In particular, local and regional governments have expressed frustration that they lack a vote or even a seat at the table when management policies are established for the lower riverway. Insufficient coordination occurs with other agencies that have management responsibilities on the St. Croix, such as the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, the Minnesota Pollution Control Agency, and the Minnesota and Wisconsin departments of transportation. There is also a need for better coordination and communication between the public and the riverway managing agencies.

Issues Not Addressed in the Cooperative Management Plan

Several ongoing issues and projects are not directly addressed by this plan. The question of whether or not to build a new bridge between Houlton and Stillwater was and continues to be addressed in a separate environmental impact statement developed by the Minnesota and Wisconsin Departments of Transportation and Federal Highway Administration, with input from the National Park Service, the Minnesota and Wisconsin Departments of Natural Resources, and others. The question of whether or not to build a replacement for the existing lift bridge at Stillwater is an issue that will be addressed in separate environmental impact processes, independent of this plan.

One other existing proposal for the lower riverway also is not addressed in this plan. A proposal to build an electrical transmission line across the river in the Taylors Falls/St. Croix Falls area is being addressed in a separate environmental review process being led by the Rural Utility Service, the Minnesota Environmental Quality Board, and the Wisconsin Public Service Commission. The question of whether to build this line, called the Chisago Project, and if so, where, is being addressed independently of this plan.

OTHER RELATED PLANNING EFFORTS

Several other plans — both within the riverway and the larger watershed — are in place or are being developed, all of which provide management direction to the lower riverway. These plans are summarized below.

An Interagency Cooperative Fisheries Management Plan for the riverway, developed by the Minnesota and Wisconsin Departments of Natural Resources and the National Park Service, will be released in 2000. The plan will set the framework for cooperative management of the fisheries resources of the riverway.

Recovery plans for the Higgins' eye mussel and the winged mapleleaf mussel were completed in 1983 and 1997. The Higgins' eye plan is currently being updated. These recovery plans prescribe management actions to protect the mussels and their habitat and to lead eventually to stable populations.

A *General Management Plan* for the Upper St. Croix National Scenic Riverway was recently completed by the National Park Service. The plan for the Upper St. Croix and Namekagon Rivers also addresses an array of management issues. Although there is a clear link between the two areas and their management, and the planning processes are related, the distinction is that the Upper St. Croix National Scenic Riverway is solely managed by the National Park Service. The states of Minnesota and Wisconsin and the Minnesota-Wisconsin Boundary Area Commission cooperated in the development of the plan for the upper riverway. This planning process for the upper riverway began in the winter of 1994–95. The final plan was published in August 1998.

The St. Croix *Watershed Stewardship Initiative* is being prepared in conjunction with the cooperative management plan through efforts of the planning task force and partnership team members. Based largely on recognition of the important relationship between the St. Croix Riverway and its approximately 7,760 square-mile watershed in Minnesota and Wisconsin, this initiative will be a "vision-type" plan that embraces the unique and precious character of the area. Collaborative planning includes participation by citizens and local and regional governments. The product will be a guidebook that is companion to the *Cooperative Management Plan* for the riverway, which includes common visions as well as management of the watershed through proper stewardship efforts. A strong connection will be shown that what happens on the lower riverway is strongly influenced by what happens in the watershed. A watershed resources directory and a website and anticipated yearly symposiums are also part of the initiative.

The National Park Service has prepared a *Water Resource Management Plan* (NPS 1997) to guide actions in the federally administered portions of both the upper and lower riverway. This plan summarizes data, recommends additional research, inventories, and monitoring, and proposes actions to address management issues such as establishing a cooperative interagency database. Work on this plan was completed in spring 1997.

The *St. Croix River Basin Water Resources Management Plan* is being prepared by an interagency task force, which includes the U.S. Geological Survey, National Park Service, the Wisconsin and Minnesota Departments of Natural Resources, the Minnesota Pollution Control Agency, Metropolitan Council, the Environmental Protection Agency, the University of Minnesota, the Great Lakes Indian Fish and Wildlife Commission, and the Minnesota-Wisconsin Boundary Area Commission. This project's goal is to protect and improve the quality of the surface and groundwater resources of the St. Croix River basin through coordinated planning and management. Elements of this process were completed in 1995 and 1997, and other elements are scheduled for completion in 1999 and 2001.

The *National Water Quality Assessment Program* examines the status and trends in water quality in the upper Mississippi River basin between Royalton, Minnesota, and Lake Pepin (in both Wisconsin and Minnesota), including the St. Croix basin. This study, led by the U.S. Geological Survey, is aimed at providing water quality information to policymakers; as such, it is a valuable contributor of information to the St. Croix River basin water resources management plan process. A report is scheduled to be completed in 2001.

The *Zebra Mussel Task Force Action Plan* presents a strategy to prevent or slow the spread of the zebra mussel into the St. Croix Riverway (see appendix G). The task force, composed of representatives of the National Park Service, Minnesota and Wisconsin Departments of Natural Resources, U.S. Fish and Wildlife Service, Great Lakes Indian Fish and Wildlife Commission and Minnesota-Wisconsin Boundary Area Commission updates this plan annually.

Several other NPS plans relate specifically to both the upper riverway and the federally administered portion of the lower riverway. These include the *Resources Management Plan, Land Protection Plan,* and the *Strategic Plan*. These plans are updated periodically. (The National Park Service is also preparing a *Fire Management Plan* for the upper and lower riverway, which addresses fire suppression and prescribed burning for ecosystem restoration purposes.)

The U.S. Army Corps of Engineers prepared a channel maintenance management plan in 1997. This plan, which is updated regularly, provides historic data on the St. Croix channel and states the Corps' dredging policy, mitigation strategies, and coordination for maintaining the navigation channel in the St. Croix. The plan specifically focuses on work needed to maintain the channel in the Kinnickinnic Narrows and at Hudson.

Because the boundary of the riverway either includes or is directly adjacent to several state and county properties, there are many state, county, city, and regional plans that could significantly influence the riverway. These include management plans for Minnesota Interstate, Wisconsin Interstate, William O'Brien, Afton, and Kinnickinnic State Parks; St. Croix Bluffs Regional Park; and the St. Croix Islands Wildlife Area. All of the counties also have revised, or are in the process of developing, comprehensive land use/zoning plans: Chisago County has updated its shoreline and zoning ordinance and comprehensive plan; Washington County recently completed updating its comprehensive plans; Pierce County has a comprehensive plan in place and recently adopted a comprehensive zoning ordinance; and Polk, St. Croix and Chisago Counties are revising and developing comprehensive land use plans.

Numerous cities and towns along the Lower St. Croix have also comprehensive plans or are in the process of updating land and zoning planning guidelines.

Also of importance to the Lower St. Croix Riverway is the Metropolitan Council. Influencing significant portions of the area in proximity to the Twin Cities in Minnesota are regional planning efforts that include current and long range urban development guidelines. The council's policies directed toward guiding the region's growth include the *Aviation Policy Plan*, the *Recreation Open Space Policy Plan*, the *Transportation Policy Plan*, the *Water Resources Management Policy Plan*, and the *Regional Blueprint*.

NEXT STEPS IN THE PLANNING PROCESS

This *Final Cooperative Management Plan / Environmental Impact Statement* for the Lower St. Croix National Scenic Riverway includes responses to substantive comments on the draft plan. It will be approved by the National Park Service's Midwest regional director, the Wisconsin Department of Natural Resources secretary, and the Minnesota Department of Natural Resources commissioner. At least 30 days after the final environmental impact statement / cooperative management plan is printed, the National Park Service will publish a record of decision in the *Federal Register*. Following this process, the final cooperative management plan will be produced. The managing agencies will implement the plan as funding becomes available.

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Management Directions Common to All Alternatives

Land & Water Use Alternatives

Management Structure Options

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INTRODUCTION

FRAMEWORK FOR THE ALTERNATIVES

This chapter describes a range of alternatives for use and management of the Lower St. Croix National Scenic Riverway. The alternatives and the assessment of the potential environmental consequences of the alternatives, which is presented in the "Environmental Consequences" chapter, form the core of the *Draft Cooperative Management Plan / Environmental Impact Statement*. Alternatives in this plan describe different general concepts or visions for the future of the lower riverway over the next 15 to 20 years. They are intended to enable managers, users, neighbors, and the public to consider different approaches to managing users and resources, directing development, and resolving conflicts.

The chapter is divided into several parts. First, there is a discussion of how the alternatives were developed. A number of common management directions and associated strategies that would be implemented under all alternatives are then described. The land and water management areas that would be applied in most of the alternatives follows that discussion. Next, the preferred alternative is presented — the plan the riverway managing agencies are proposing to implement on the Lower St. Croix — followed by four other alternatives for managing the land and water in the lower riverway. The "no action" alternative is also presented, which describes how the lower riverway is currently managed and would be managed in the future if no major changes occurred. Each alternative includes a description of the management concept and its intent, and a discussion of how the land and water in the riverway would be managed. Each of the action alternatives have a map showing where different land and water management areas would be designated, a discussion of several key topics that vary between the alternatives (e.g., river crossings, vegetative management), and a discussion of what would be needed to implement the alternative. Following these alternatives are other alternatives that were originally considered but not analyzed further.

After the six land use/water use management alternatives, a set of options is presented that identifies different organizational structures for the future management of the lower riverway along with a preferred option. Any of the management structure options could be combined with any of the land and water use management alternatives.

Implementation costs for each alternative are presented at the end of the chapter. Tables summarizing the key differences between the land use and water use alternatives and the impacts of implementing the alternatives as well as tables summarizing the management structure options and their impacts follow the discussion.

The preferred alternative and common management directions suggest guidelines for new state regulations governing land uses and water-based recreational (see appendixes A and B). Additional regulations of some riverway uses might be needed in the future. However, the managing agencies would solicit additional public input before implementing any regulations that would alter use patterns or levels on the riverway, change land use, etc. This would include any new regulations proposed as the result of the *Cooperative Management Plan* and any other possible future regulations not specifically identified in this plan. If new federal regulations were needed, the National Park Service would print the proposed regulations in the *Federal Register* to solicit public comment.

DEVELOPMENT OF THE ALTERNATIVES

In developing the common management directions and the alternatives, several elements were considered: the lower riverway's resources and uses, its purposes and significance, the overall vision for what the riverway ideally would look like in 20 years, the managing agencies' missions, mandates, and constraints, and the major riverway issues that reflect differing desired futures.

A series of potential management areas were identified to describe desired user experiences and resource conditions that could be provided. Then different concepts were developed for managing the land uses and water surface uses within the riverway boundary. Five concepts were initially identified for land use management and five concepts for water surface management. When combined, these concepts could result in 25 possible alternatives. However, not all combinations were viable, reasonable alternatives, and from a practical standpoint it was too time consuming and costly to assess the implications of these alternatives.

Five alternatives were selected for managing the Lower St. Croix, plus a "no action" alternative. After an alternatives workbook was published, one of these alternatives —alternative E — was subsequently dismissed from further consideration. A series of additional meetings were then held to further refine the alternatives and the common management directions.

These five alternatives represent a full range of reasonable alternatives for managing the lower riverway. They address different desired futures while remaining consistent with the riverway principles, planning assumptions, purposes and significance, legislative mandates (e.g., the Wild and Scenic Rivers Act and the Endangered Species Act), and the lower riverway managing agencies' missions.

The next major step was to develop a preferred alternative. A public workshop was held using a caucus/negotiation process to develop the preferred alternative. Individuals divided into caucus groups that were closest to their desired future for the riverway and determined what positions to take where there were different viewpoints. Representatives from these groups then met and negotiated to reach consensus where possible. Unresolved issues were discussed at subsequent workshops. Of 106 decision points in development of a preferred alternative, consensus was reached on 79 issues (75%) and forwarded 27 issues for resolution by the management commission.

It should be remembered that the preferred alternative could still change. Following public review of this draft document, more changes could be made to the preferred alternative, or a different alternative could be selected as the preferred alternative.

Management Directions Common to All Alternatives

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MANAGEMENT ACTIONS

Several management actions need to be taken on the lower riverway regardless of which alternative is approved by the National Park Service and the Minnesota and Wisconsin Departments of Natural Resources. These management actions would be taken under all of the alternatives. Most of these actions are based on existing state and federal laws, cooperating agency policies, and general planning principles, all of which support the purposes and significance of the lower riverway.

COORDINATION AND COOPERATION AMONG MANAGING PARTNERS AND BETWEEN GOVERNMENTAL AND PRIVATE ENTITIES

The National Park Service, Minnesota Department of Natural Resources, and Wisconsin Department of Natural Resources have a long history of working together as managing partners on the lower riverway. The managing agencies would continue to work together to guide activities and management within the riverway consistent with the approved management plan.

Because Minnesota and Wisconsin also manage lands that are adjacent but not within the riverway boundaries, the managing agencies would encourage management of both states' lands (state parks, wildlife management areas, and natural areas) in a manner that would be consistent with the cooperative management plan.

The enabling legislation for the riverway specifies that the National Park Service will have primary management responsibility north of Stillwater and that the states will be the primary managers from Stillwater south. In practice however, there is significant overlap in jurisdictions. The states have the same on-water law enforcement authority and the same oversight over private land use both north and south of Stillwater. Despite jurisdictions that sometimes overlap and sometimes do not, the three managing agencies would strive to manage the entire riverway holistically.

Although there are alternatives for certain approaches to management activities (see the "Introduction"), the managing agencies would coordinate management activities and responses to riverway issues and concerns to facilitate an integrated and consistent management approach. Whenever possible, the agencies would actively pursue and support cooperative studies and planning for land and water resources management in areas of mutual interest.

Many other agencies and organizations within and outside the riverway also affect the management and use of the Lower St. Croix National Scenic Riverway. These include many private businesses, five counties, numerous municipalities and townships, the U.S. Fish and Wildlife Service, U.S. Coast Guard, U.S. Army Corps of Engineers, the Minnesota-Wisconsin Boundary Area Commission, the Environmental Protection Agency, other state agencies, and private groups and individuals. The cooperation of these organizations is essential to the effective and efficient management of the lower riverway. The managing agencies would work cooperatively with all levels of government and the private sector to ensure the protection of the riverway's resources and maintain quality experiences for all users; manage land use, water surface use, vegetation, wildlife, and fisheries; and deal with other issues of mutual concern. Cooperative relationships would be fostered through regular communication and establishment of informal and formal partnerships or agreements such as implementation of the *Zebra Mussel Task Force Action Plan*. The managing agencies would coordinate enforcement of laws and regulations with local governments and other state and federal agencies (e.g., Minnesota Pollution Control Agency, U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Environmental Protection Agency). Optional riverway administrative and management frameworks for achieving a cooperative and coordinated management approach are presented later in this chapter.

LAND USE MANAGEMENT

Management of private land use is a partnership between the states and local governments. Local governments enact and enforce zoning ordinances based on state standards. Under no circumstances would state standards adopted for the riverway be less restrictive than statewide shoreland management standards. These standards apply to the lands within the rvierway boundary (as published in the *Federal Register*) between the dam at St. Croix Falls / Taylors Falls and the confluence of the Mississippi River .

AMERICAN INDIAN TREATY RIGHTS

Eight Anishinaabe, or Chippewa bands, the Mille Lacs, Fond du Lac, St. Croix, Bad River, Lac du Flambeau, Lac Court Oreilles, Sokagon, and Red Cliff, have had off-reservation treaty rights reaffirmed within the riverway. In the treaty signed in 1837, the Chippewa ceded lands to the U.S. government, but retained the rights to hunt, fish, and gather on these lands, including those along the St. Croix north of Cedar Bend (river mile 41, south of Osceola). All American Indian treaty rights would be respected. The managing partners would work with the affected tribes to ensure that tribal subsistence hunting, fishing, and gathering rights within the riverway were available to and appropriately exercised by tribal members. The National Park Service and state authorities recognize these treaty rights and would work with the tribes, individual bands, and the Great Lakes Indian Fish and Wildlife Commission to ensure that the rights would be honored and that issues of common interest would be addressed.

Bands of the Sioux, or Dakota, nation at one time also occupied lands in the St. Croix valley. Although the Dakota have no treaty rights in the riverway, they retain historic and cultural ties to the area which must be respected. The managing partners would consult with representatives of the Dakota nation to identify significant sites associated with the tribe's history and ensure proper interpretation of the Dakota's historic use of the riverway.

RIVERWAY STEWARDSHIP

On the Lower St. Croix, stewardship would involve ensuring the rights of the current generation to use and enjoy the riverway without interfering with the rights of future generations to use and enjoy the same high-quality resource.

The managing agencies would strongly encourage landowners, local governments, and riverway users to adopt, with a cooperative spirit, the riverway's philosophy of preservation and protection of its significant resources and values. Building a stewardship commitment among river landowners, local officials, and users would be essential because the state and federal governments could not achieve the long-term riverway protection goals alone.

The managing agencies would work to build public stewardship and support for riverway protection. They would promote awareness, understanding , and support for protection of the riverway's natural, cultural, scenic, and recreational values, and the rules, regulations, and policies that guide riverway activities and uses. This would be done in a variety of ways, such as interpretive exhibits, educational outreach programs, newsletters, and presentations to local governments and publics. Land and recreational use practices (e.g., soil erosion prevention, minimum impact camping) that protect and enhance riverway resources and values would also be encouraged, as would involvement by volunteer groups and individuals in organized river protection programs such as Adopt-a-River and Riverwatch. The Minnesota-Wisconsin Boundary Area Commission and private organizations, such as land trusts and the Wisconsin Farmland Conservancy, are actively involved in a variety of efforts to promote private land stewardship in the riverway, and their roles are expected to continue in the future.

The riverway is strongly influenced by what happens in the greater watershed. Locally initiated stewardship efforts would be integral to managing and protecting environmental resources (e. g., wildlife habitat, remnant plant communities, scenic areas) not only within the riverway but within the greater viewshed, which frequently extends outside the riverway boundary and watershed. Local government programs and policies that would promote voluntary means to help protect and preserve the riverway's resources would be encouraged. Local initiatives within the watershed would complement the protective efforts within the riverway. Innovative and cooperative efforts, such as the land stewardship program initiated by Washington and Chisago Counties in collaboration with their local units of government and citizens to create a protected green corridor, is an example of one such effort. Other ongoing programs by the Natural Resources Conservation Service, county conservation departments, and watershed districts would also continue to promote stewardship and use of best management practices. Forest stewardship programs are another example of landowner assistance with broad implications for watershed management.

A *Watershed Stewardship Initiative* is in progress to address broader watershed issues facing the riverway. Work has begun to further engage citizens, interest groups, and governmental agencies into crafting an overall stewardship framework to identify and compile key issues, concerns, and opportunities within the larger St. Croix watershed area (totaling approximately 7,760 square miles in Wisconsin and

Minnesota). Efforts are currently underway to identify the scope of the stewardship initiative, setting a common vision/ mission direction and organizing the wide variety of "stakeholder" groups in the St. Croix area. Since this initiative extends to the entire watershed and far beyond the regulatory boundary of the riverway, it depends entirely on the voluntary actions of citizens and local governments (additional description of the initiative is found on page 19).

NATURAL RESOURCES MANAGEMENT

Under all of the alternatives the lower riverway's natural resources would continue to be managed in accordance with NPS and Minnesota and Wisconsin state policies and regulations. The managing agencies would strive to maintain all the components and processes of the riverway's naturally evolving ecosystems, including the natural diversity and ecological integrity of the riverway's plants and animals.

The managing agencies would pursue resource inventory, monitoring, and research programs to enhance knowledge of vegetative communities, wildlife populations, and natural processes and to evaluate trends and threats. This information would provide the basis for the preparation and periodic updating of specific management plans (e.g., fisheries management plan, water resources management plan).

Cooperative management of resources would be encouraged by conducting joint/cofunded programs and preparing comprehensive, interagency management plans where appropriate.

Water Quality and Quantity

The water quality of the Lower St. Croix is relatively good and is one of the riverway's most important assets, but the quality of the river's water is slowly degrading from a variety of point and nonpoint sources. The managing agencies and the Minnesota Pollution Control Agency (MPCA) would work to protect and improve the water quality of the lower riverway. Recognizing that the water quality management programs of both states are not identical, effective water quality protection and improvement would be enhanced by establishing uniform water quality goals for the lower river. The states would implement their planning, regulatory, and assistance programs to achieve agreed to water quality goals. This approach would apply to both point source and nonpoint source water quality management programs.

The managing agencies and the MPCA, Minnesota-Wisconsin Boundary Area Commission, Environmental Protection Agency, and U.S. Geological Survey would continue to develop and implement water quality protection measures. Current activities are underway to complete a St. Croix Water Quality Management Plan. As established, this plan will be a compilation of current, ongoing, and projected technical water resources studies related to the St. Croix River and its' 7,760 square- mile basin area. Included in the analysis are water quality monitoring programs, nutrient loading issues, impoundment affects, and other subjects relative to water quality impacts. This planning effort will address protection and improvement of both surface and groundwater resources within the entire St. Croix river drainage. Interagency development of a whole basin strategy for the St. Croix River would provide a more comprehensive and integrated effort to establish uniform water quality goals and protect water resources. Studies and data collection needed to obtain information to determine specific water-quality goals and priorities has been initiated and will continue. Surveys of resource conditions and major pollutants and ground water contaminants, determination of the sources of pollutants both within and outside the riverway, identification of impacts from land- and water-based uses, and establishment of a long-term monitoring program would be pursued. Based on this information, specific goals, projects, and mitigating measures would be developed and implemented. Interagency partnerships with local governments would be used to focus financial resources and expertise on issues of common concern. Development and implementation of the basin water quality management plan would also be coordinated and integrated with other related basin area activities. Examples of these activities include the Upper Mississippi National Water Quality Assessment Program, Wisconsin Department of Natural Resources, Minnesota Pollution Control Agency basin plans, local watershed plans, as well as other local programs by the Natural Resources Conservation Service, county conservation departments, and watershed districts.

Floods occur on a regular basis on the St. Croix. Damage to managing agencies' lands and facilities from floods is usually related to deposition of sediment or erosion of shorelines. In the event of a large-magnitude flood with severe damage, restoration of facilities would be evaluated on a case-by-case basis. The managing agencies might choose to close damaged facilities and restore the location to natural conditions. Where there was damage, such as bank erosion, that was not associated with managing agency facilities, natural forces would be allowed to take their course.

As dams on the St. Croix River and its tributaries age, their removal may become a reasonable and even desirable option. As part of the water basin planning effort and other ongoing resource studies, the effects of the hydropower and nonhydropower impoundments and their operations on the St. Croix River and its tributaries would be investigated. Both the positive and negative changes to river morphology, water quality, biological communities, recreation, and aesthetics would be evaluated. Potential benefits to the long-term natural hydrologic and ecological conditions of the river and watershed from dam removal or operational flow modification would be identified.

Air Quality

The managing agencies monitor air quality-related values of the riverway from adverse air pollution impacts. Air quality related values include visibility, water quality, vegetation, wildlife, historic and prehistoric structures and objects, and other resources that could be degraded by air pollution. Air quality within the riverway and the effects of air pollutants upon the riverway's resources is difficult to evaluate without adequate information. State air quality management programs would continue to be a primary mechanism for addressing air quality monitoring and pollutant prevention and control. In addition, air quality indicators within the riverway, such as pollution-sensitive lichen species, would be identified and monitored to evaluate air quality trends.

Mussel Management

A cooperative interagency approach is underway and would continue to protect and conserve the native freshwater mussel assemblage and habitat found within the St. Croix watershed. Mechanisms to increase coordination and information exchange among all agencies, organizations, and institutions that study, manage, conserve, or recover native freshwater mussels in the St. Croix watershed would be identified and developed. Fundamental knowledge about the mussel fauna and habitat is critical to effectively managing and conserving this resource. Studies would be initiated to enhance knowledge on the basic biology and habitat requirements, status and trends, and threats and impacts from various sources and activities to native mussel populations and their habitats. Management strategies would be developed to protect and reverse the decline of quality mussel habitat and to minimize or eliminate threats from zebra mussels and other non-native species. The *Zebra Mussel Task Force Action Plan* would continue to be fully implemented. Regulations prohibiting the harvesting or taking of mussels would continue to be strictly enforced in the federally administered zone.

The future of the freshwater mussel fauna as well as other aquatic and aquatic-dependent species of the riverway would depend a great deal on the degree of public and other agency support for aquatic ecosystem protection and recovery programs. An information and education program would be developed and implemented to increase public awareness of the plight of mussels and the benefits of maintaining the ecological integrity of aquatic ecosystems and to develop support for protection efforts.

Two mussel species, the winged mapleleaf and Higgins' eye, are listed as federally endangered species. The managing agencies would continue to support the successful implementation of the U.S. Fish and Wildlife Service's recovery plans for these species. Habitat protection actions such as retrofitting bridges for spills containment and run-of-the-river hydropower generation at the NSP dam should be evaluated for implementation.

Fisheries Management

The managing agencies, in cooperation with the Chippewa tribes, would manage the lower riverway's fisheries to maintain the diversity and abundance of the riverway's native fisheries and maintain and restore their aquatic habitat. Fish harvests would be managed to be sustainable and consistent with sound resource management principles. Resource inventory, monitoring, and research programs would be pursued to enhance knowledge of fish populations and their habitats to determine and evaluate changes in response to habitat dynamics, recreational fishing, land use, and management actions. The managing agencies completed a Memorandum of Understanding related to fisheries management in the spring of 1998. One key element of the MOU is preparation of an interagency cooperative fisheries management plan for the entire riverway. The plan should be completed in 2000 and should include recommendations specific to the lower riverway.

Exotic Species

A number of invasive exotic plant species are already present in the Lower St. Croix

National Scenic Riverway. Some of these plants, such as purple loosestrife, Eurasian water milfoil, spotted knapweed, and buckthorn are threats to the riverway's natural ecosystems. The managing partners would survey and monitor the riverway for the presence of exotic plant species. They would control as best they can those exotic species that are a hazard to public safety, damage historic or archeological resources, interfere with natural processes and the perpetuation of natural features or native species, or significantly hamper the management of the riverway or adjacent lands. High priority would be given to controlling exotic species that have a substantial impact on the riverway's resources and that could reasonably be expected to be successfully controlled.

The Lower St. Croix is currently free of zebra mussel infestation, although they have been found attached to recreational boats on the river. A zebra mussel action plan has been prepared by the interagency Zebra Mussel Task Force and is updated annually (see appendix G). The managing agencies would implement the recommendations of the Zebra Mussel Task Force, as identified in the current action plan and any future revisions, that were within the authority of the agencies to carry out. The Zebra Mussel Task Force would continue to monitor for the presence of the zebra mussel, inform and educate the public about the mussel and the threat it poses, and take actions including regulations and enforcement to prevent zebra mussels from becoming established. In addition, the states have received funds from the National Aquatic Nuisance Species Task Force to implement the *St. Croix National Scenic Riverway Comprehensive Interstate Management Plan for the Prevention and Control of Nonindigenous Aquatic Nusance Species*. This plan focuses much of its attention on the zebra mussel but also addresses the rusty crayfish, a snail of the genus Cipangopaludina, and the Asiatic clam, all of which have been in the St. Croix River. The plan also covers several species that are found in the Mississippi River watershed that potentially threaten the St. Croix, including the spiny water flea, grass carp, bighead carp, rudd, ruffe, round goby, and white perch.

Threatened and Endangered Species

The federal Endangered Species Act provides special protection to all federally listed threatened and endangered species and their critical habitats. Plants and animals appearing on state lists of endangered, threatened, and special concern species also have special status. The riverway contains a number of plants and animals that appear on federal and/or state lists and therefore are provided special protection under state and federal laws. The National Park Service and the two departments of natural resources have special responsibilities to protect these species and their habitats. In addition, the three agencies will work with the U.S. Fish and Wildlife Service and the Great Lakes Indian Fish and Wildlife Commission to inventory, monitor, protect, and perpetuate the natural distribution and abundance of special status species. The agencies would implement their respective components of the recovery plans developed for threatened and endangered species (see appendixes D and E).

MANAGEMENT OF HUNTING, FISHING, AND TRAPPING

The management of hunting and fishing as recreational activities would continue to be primarily the responsibility of the respective states. The two state departments of natural resources will set quotas and bag limits to maintain balanced game and non-game populations. The National Park Service would continue to cooperate with the state departments of natural resources and the affected Chippewa bands in regulating sporthunting, fishing, and subsistence harvesting of wildlife and fish within the riverway. The Chippewa view hunting, fishing, and gathering as traditional subsistence activities. Their off-reservation treaty rights allow them under certain circumstances to trap furbearing animals and to spear and net fish in the riverway north from Cedar Bend.

Chippewa hunting, fishing, and trapping rights along a portion of the riverway were reserved in the Treaty of 1837. Tribal members exercising these rights are regulated by tribal codes that must be no more liberal (but that may be more restrictive) than the model off-reservation Conservation Code that the various bands sharing these off-reservation harvesting rights have adopted. Any licenses, permits, or tags that tribal members require are obtained from their tribe or from the Great Lakes Fish and Wildlife Commission, which was formed to assist its member tribes in the exercise of these rights. The commission also works with the tribes and other state and federal natural resource agencies to ensure that all harvests are sustainable and consistent with sound resource management principles.

Other groups who have recently moved into the region have different cultural approaches to fishing. Some might not be entirely familiar with state regulations governing fishing in the riverway and federal regulations prohibiting the taking of mussels. The managing agencies would devise new or use existing outreach programs that would communicate natural resource regulations to these groups.

The safety of recreationists and the general public would be of primary concern, especially in areas of increasing development and human encroachment. The managing agencies might also limit access based on wildlife management and safety considerations.

Trapping would continue to be managed on all lands and waters on NPS fee lands as established by past federal court decision. Outside NPS jurisdiction, trapping would continue to be regulated by the two state departments of natural resources. There is an exception for qualified Native Americans exercising their treaty rights.

RECREATIONAL USE MANAGEMENT

General Types of Uses

Recreational use management has some aspects that vary by alternative, however, there are some aspects that are common to all of the alternatives, which are discussed in this section. The cooperating managers would work to promote uses and behaviors that ensure high-quality and safe experiences for all users and help maintain and protect the riverway's resources. Under all of the alternatives a variety of water uses would continue, including nonmotorized and motorized activities. However, some alternatives place greater emphasis on slow, nonmotorized boating while others emphasize less restricted boating. With regard to terrestrial recreational uses, in all of the alternatives, existing uses (e.g., biking, hiking, and the use of motorized vehicles) would continue on designated roads and trails within the riverway. Other than existing state regulations pertaining to trail uses, no additional regulations would be imposed unless they were needed for safety or resource protection, or to address conflicts that might arise from increased use or new types of uses. Camping would also continue; however, restrictions such as designation of sites or closures of some islands to camping would vary under the alternatives. In general, recreational uses would continue unless it is demonstrated that unacceptable resource impacts, user conflicts, or conflicts with adjacent private landowners are occurring.

State, county, and city parks and nongovernmental nature centers in both Wisconsin and Minnesota would continue to provide recreational opportunities (e.g., swimming beaches, picnic areas, campgrounds, trails) within or close to the riverway. Additional overlooks, picnic areas, and other opportunities to enjoy the river from the land would be encouraged in accordance with the riverway's management area scheme and would most likely be accomplished through public/private partnerships. The five state parks that abut the lower river, while technically not within the official riverway boundary, would be managed in a way that is consistent with this plan.

Many miles of trails offer hiking, bicycling, horseback riding, skiing, snowmobiling, snowshoeing, and other activities. A number of private groups and communities in the St. Croix Valley are working to expand the network of existing trails. For example, a trail is proposed from William O'Brien State Park to Taylors Falls. The riverway managing agencies would work in partnership with user groups, communities, local agencies, and others in development of a comprehensive regional trail network to provide trail connections to link trails along or near the river and with other areas outside the river corridor. Trail development would be coordinated with state trail plans, county comprehensive plans, and other pertinent plans. Assistance of user groups and other trail supporters would continue to be integral to the development and maintenance of trails.

Existing railway rights-of-way might offer the potential to expand trails and river access for the nonboating public within the lower riverway. Abandoned railway rights-of-way, if and when available, would be pursued for conversion to trails consistent with the National Rail to Trails Act. Also, when roads along the river were improved, the addition of bicycle lanes would be encouraged.

The amount of recreational use in the winter is far less than that which takes place during other seasons. Winter recreational uses that are consistent with the purposes of the riverway and that do not require major new facilities would continue to be allowed. New regulations would be instituted only as necessary for safety or to address conflicts or resource protection needs that might arise from increased use or new types of use. The managing agencies would work to resolve inconsistencies in existing winter use regulations governing icehouse use and licensing.

The frozen river surface between Osceola and St. Croix Falls/Taylors Falls is closed to snowmobile use under 36 *Code of Federal Regulations* 7.9. Snowmobiles are allowed on the frozen river surface of the St. Croix south of Osceola and designated trails that traverse the riverway, and snowmobile use would continue in accordance with state and/or federal snowmobile use policy and regulations.This use would be restricted if there were unacceptable resource impacts, user conflicts, safety considerations, or conflicts with adjacent private landowners.

Cross-country skiers would continue to be permitted to use the frozen river or other unmarked, unofficial routes in the riverway. Although activities on the frozen river surface (e.g., cross-country skiing, snowshoeing, snowmobiling, ice fishing) would be permitted, the managing agencies would not encourage such use because of the inherent danger.

Any new activity within the riverway which would draw large gatherings of people and would likely cause the pollution, impairment, or destruction of the air, water, land, or other natural resources in the riverway should be prohibited.

Where there is no feasible and prudent alternative and the gathering is consistent with and reasonable and required for the promotion of the public health, welfare, and safety, the gathering may be permitted. Economic considerations alone will not constitute reason for approval by any agency or authority over the matter.

User Carrying Capacity

To properly administer areas designated as national wild and scenic rivers, managing agencies are required as part of the long-term planning process to address the issue of resource protection in relation to user carrying capacity. There are several processes for accomplishing this social science research, but each tries to answer the same question – at what level does use begin to degrade natural and cultural resources, aesthetic values, and user experiences? In other words, carrying capacity is not strictly interpreted as an absolute number of people (except in the case of health and safety) but as a prescription of user experience (social) and resource conditions.

To fully address the lower riverway's carrying capacity, after this plan is implemented additional work would be needed to set indicators and standards (which are minimum acceptable conditions) in the land and water management areas and to develop a variety of monitoring strategies. In addition, the managing agencies would continue to undertake water surface use monitoring studies conducted biennially since 1977.

User Safety

Although users assume a certain degree of responsibility for their own safety when visiting the lower riverway, the managing partners would reduce hazards where practical and might limit access to certain areas at certain times based on safety considerations. Actions to prevent known hazards would not conflict with the managing partners' mandates to preserve the riverway's resources. Safe conditions would be maintained.

Commercial Services and Concession Operations

A large number of people using canoe livery operators on the lower riverway has the potential to significantly affect the recreational experiences on the riverway as well as the riverway's resources. Therefore, the National Park Service and state departments of natural resources would evaluate the need to place canoe livery operators under a permit system. The purposes of this permit system would be to ensure that opportunities for a quality experience were maximized, to encourage the highest degree of safety and interpretation of the resources, and to ensure that riverway resources were protected. To determine the impacts of these operations on the resources, the permit system would also gather information to use in future planning efforts to ensure that the authorized services would not have an adverse impact on park resources.

The Minnesota Department of Natural Resources currently authorizes one concessioner that operates the canoe rentals at Minnesota Interstate Park and William O'Brien State Park. There does not seem to be a large demand for additional types of goods and services that could be provided through concessioner operations. A policy for providing additional goods and services via concessioner operations within the lower riverway would be developed if demand warranted. The managing agencies would only consider contracting for additional concessioner services if such services were necessary and appropriate for public use and enjoyment of the riverway and if they were consistent with the preservation and conservation of the areas. If such services were provided, additional staff and staff time would be required to manage and monitor concession contracts.

There are several commercial public excursion boat operations on the river. They provide river access for large numbers of people who might otherwise not be able to use the river. Excursion boat operations are acceptable if they operate from existing facilities and offer regular public cruises. Transient docks available to the public provide opportunities for boaters to leave the river for brief periods to visit local businesses and public facilities. Transient docks are acceptable in existing facilities, providing dockage for more than 24 hours is prohibited.

Accessibility for Individuals with Disabilities

The managing partners would strive to provide the highest level of accessibility possible to buildings, facilities, programs, and services, consistent with the nature and limitations of the area, the conservation of riverway resources, and the mandate to provide a quality experience for everyone. Any new developed user or employee facility and any alterations to existing facilities would be evaluated in accordance with the Americans with Disabilities Act (42 USC 12101) and *Uniform Federal Accessibility Standards* (49 FR 31528) to provide full accessibility to all users. Wherever possible, information about facilities and programs for people with sensory and mental disabilities would be available.

INTERPRETATION AND EDUCATION

Interpretation within the riverway would focus on four primary goals:

- increase public awareness of the lower riverway as a component of the National Wild and Scenic Rivers system
- increase appreciation and understanding of the riverway's resources and values

- provide information to visitors to ensure a safe and enjoyable visit
- promote visitor interaction with riverway resources that supports preservation of those resources for future generations

In support of these goals, there would be an increased emphasis placed on coordination of interpretive activities among the primary providers of interpretive services within the riverway, the National Park Service, Minnesota and Wisconsin state parks, and nongovernmental nature centers. The St. Croix Valley Interpreter's Association, an informal alliance of interpreters in the area, would continue to serve as the principal forum for coordination of interpretation, including the development of interpretive programs and activities (which are key ideas or stories that should be imparted to riverway users). The National Park Service visitor centers, state parks, and nongovernmental nature centers could focus on the same interpretive topic at the same time, offering complementary programs and activities.

Other cooperative efforts could also be pursued, such as development of a clearinghouse for information on programs and activities at the various interpretive facilities along the riverway, joint publication of information on facilities, programs, and activities, and development of common signage to be used on the riverway. Riverway interpretive programs could also be coordinated with the Mississippi National River and Recreation Area interpretive programs to expand the scope and outreach of both programs.

Cooperative partnerships with private interests (e.g., marinas, chambers of commerce, tourism organizations) could also be important to maintain and improve high-quality user services. This could include riverway orientation for employees of private sector groups.

Education efforts for both the Lower St. Croix riverway and the larger St. Croix watershed would be a major element in the implementation activities of this plan. Increased programs for the awareness of riverway water and land resources planning issues would be incorporated in educational pamphlets, public information sessions, and riverway public access signage (i.e., amended and revised boating rules, exotic species bulletins, camping guidelines, etc.). Agencies would host the St. Croix Expo, develop a St. Croix information website, and develop a St. Croix watershed stewardship guidebook.

Coordination and partnerships with the National Park Service, Minnesota Department of Natural Resources, Wisconsin Department of Natural Resources, and the Minnesota-Wisconsin Boundary Area Commission would continue and become more active in terms of educational programs and public involvement relating to the riverway and surrounding watershed area.

Management Areas

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INTRODUCTION

In developing management alternatives for the lower riverway, decisions needed to be made on what resource conditions, experiences/uses, and developments would be appropriate in different parts of the riverway. To do this, a series of management areas were developed, which were the primary building blocks for the management alternatives. The management areas identify how different portions of the riverway could be managed to achieve desired resource and social conditions, consistent with the riverway's purposes. Different types and levels of water surface uses and developments would be applied by the riverway managing agencies in different management areas.

Each alternative has different management areas and/or varying arrangements of the management areas, depending on the direction of the alternative.

Seven distinct land management areas and five distinct water management areas were originally developed for the lower riverway. These management areas were part of all the action alternatives described in the draft plan. Following public comment on the draft plan, the managing agencies combined three land management areas into a single, new land management area and eliminated one water management area. By shifting from two land-use management areas in the 1976 *Master Plan* to five, local governments would be provided with greater flexibility in administering land use controls and would be better able to target management to meet specific goals. The rural landscape would be divided into two management areas to ensure continuation of its diverse character, while three management areas would provide flexibility for managing land use in the municipalities.

Similarly, increasing surface water management areas from two in the *Master Plan* to four would provide greater flexibility in managing water uses and ensuring that the diversity of water uses on the lower riverway is maintained.

The original seven land management areas (and the one new one) and five water management areas are described on the following pages, including tables 1 and 2, which summarize the features, facilities, and types of experiences for each area. (Generalized sketches and photographs are included with the written descriptions to further illustrate the characteristics of each management area.)

Within each alternative, the boundaries between management areas are sometimes delineated by political boundaries of communities. These management area boundaries are intended to remain static over time and would not change if a community annexes adjacent land. Thus, when corporate limits are used as a line between management areas, the boundary of the management area should be interpreted to mean the corporate limit as it was in 1999.

RIVER TOWN

This management area would provide a feeling of being on a river flowing through or next to a small city. A mixture of commercial, park, and residential developments could be within the riverway; however, the historic character of the river towns would be maintained. Dense, intensive development also might be adjacent to the riverway, including utilities, multistory structures, and nonresidential buildings (e.g., shops, offices, apartments, factories, community centers). Thus, the built environment would dominate the riverine landscape and shape the riverway experience to a significant degree.

Although most of the developments in the area would not be recreation-oriented, there would be private or public facilities to support river recreation (e.g., marinas, docks, launches, ramps, interpretive kiosks); some of these facilities would be relatively large. Large numbers of people and crowds often would be present. Noise levels from users and adjacent areas (e.g., business traffic) might be high. One would not expect to see many natural features other than the river. Most of the shoreline would be developed, although some natural vegetation might screen adjacent buildings. However, these natural features would be scattered and limited in area. There would be relatively few opportunities to view wildlife, but people would still find places to fish from shore.

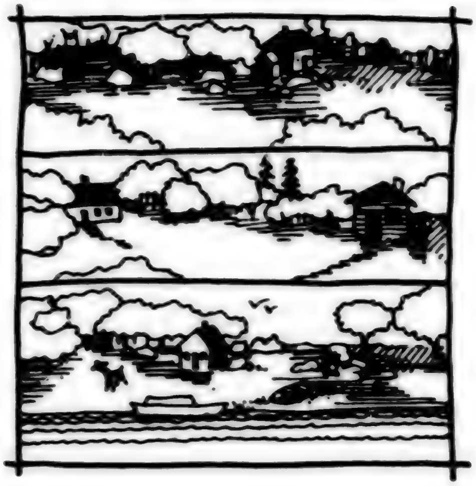
SMALL TOWN

This management area would be similar to the small town historic management area, except the predominant character of the landscape would be large-lot, single-family residences. Encounters with other people would be common, and noise levels might be moderate. Natural vegetation and landscaped environments would be interspersed with the built environment, which would be mostly residential in character. Shoreline areas generally would be a mix of natural vegetation and residential lawns, with some portions being largely undisturbed. Public and private recreational support structures, primarily small docks and boat ramps, would be scattered along the river.

SMALL TOWN HISTORIC

This landscape would be developed but would be almost exclusively single-family residences and be primarily historic in character. While some dwellings would be obviously newer, the predominant character of the community would be that of a late 19th or early 20th century residential area. A combination of the river, man-made features, and natural landscape elements would shape the riverway experience in this area. Encounters with other people would be common, although one would not see the large crowds found in the river town management areas. Noise levels within the riverway boundary could be moderate, typical of those found in a residential area. Natural vegetation and landscaped environments would be interspersed with the built environment, which would be mostly residential in character. Shoreline areas generally would be a mix of natural vegetation and residential lawns; however, portions of the shoreline would be largely undisturbed.

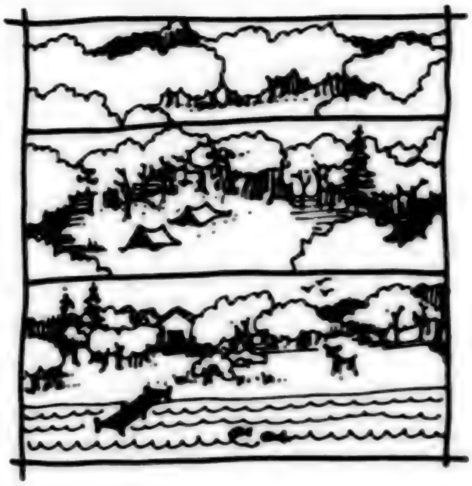
Opportunities for fishing and viewing wildlife would be limited. Public and private recreational support structures, primarily small docks and boat ramps, would be scattered along the river.



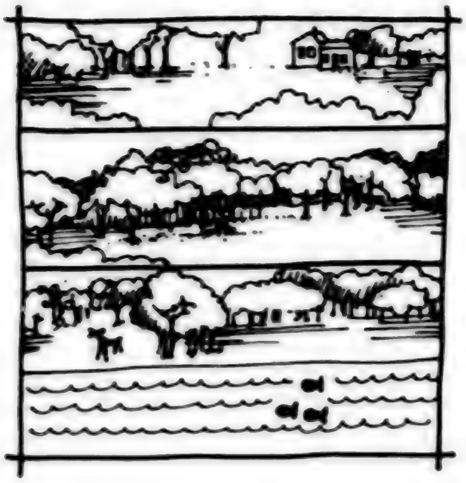
RURAL RESIDENTIAL

This area would provide a feeling of being on a river in a sparsely developed landscape. As in the small town management areas, the river, natural features, and man-made features would shape the riverway experience. Users would encounter no large concentrations of development or people — small numbers of people would be the rule in this area, with little or no commercial development. Residential settings would be limited to large lot development scattered along the shore and/or bluffs at a lower density than the small town or river town management areas. Natural vegetation would cover significant portions of the shoreline, with some stretches being largely undisturbed. Riverway users could anticipate moderate noise levels. The area would offer abundant opportunities to fish and view wildlife. There might be a few small public recreational support facilities (e.g., docks and launches) and some private docks.

PARK



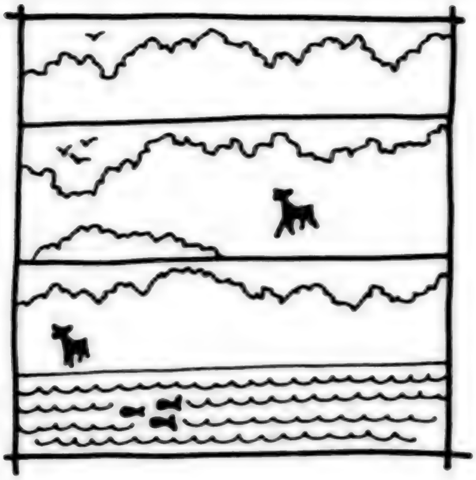
This area would include a concentration of cultural and/or natural features of special interest, as well as highly scenic and relatively undisturbed natural areas. As viewed from the river, the vast majority of this area would appear very natural, but there would be nodes of recreational support facilities that would often be the focus of relatively intense human activity. The nodes could have many recreational support facilities and services, both on and off the river, such as campsites, visitor centers, landings, picnic tables, restrooms, and trails. Future development of additional recreational support facilities would be concentrated at existing development nodes. Noise levels would be moderate near activity nodes but low elsewhere. This management area would provide many opportunities to view wildlife with abundant opportunities for angling. Users might encounter large numbers of people near activity nodes, but away from those areas users would have many opportunities to find a sense of peace and quiet.



NATURAL

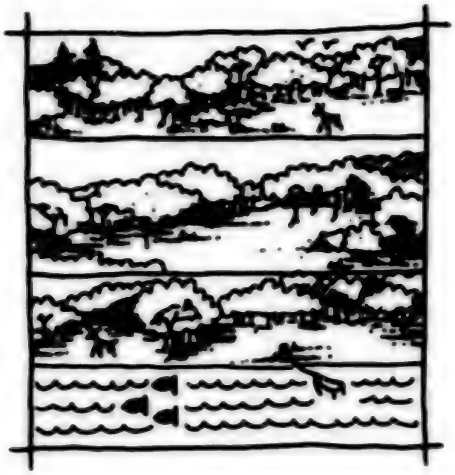
This management area would provide users with a sense of being in a natural setting. Relatively few signs of development, such as homes, bridges, or agricultural fields, would intrude on this largely natural scene. The vegetation along the shoreline would be largely undisturbed — natural vegetation (e.g., boreal hardwood and northern hardwood forests, lowland riparian forests, and oak savannahs) would cover most of the area and would be a key element of the user experience. Forest management would emphasize the undisturbed appearance.

This area would provide many opportunities to view wildlife, and there would be abundant opportunities for angling. Access to the river would be limited to a few designated public carry-in and small craft access points, and possibly some riparian landowner private docks. Only a few recreational support facilities, such as primitive campsites and trails, would be present. Noise levels would be low, relatively small numbers of people would be present, and there would be a low probability of people encountering one another. Because few people would use the area, there would be ample opportunity to find a sense of peace and quiet within the management area.



MINIMALLY DISTURBED

Minimally disturbed management areas would be similar to natural management areas but contain even fewer signs of people and developments. The river and surrounding biological communities would dominate the user experience. The shoreline would not be disturbed by the few visible signs of development. Forest management would emphasize the undisturbed appearance. Access to the river would be limited to a few public carry-in and small craft access points and possibly a few riparian landowner private docks. Recreational support facilities (e.g., primitive campsites, trails) would be small, limited in number, and screened by natural vegetation. With few or no river access points, small numbers of people, and infrequent encounters, there would be ample opportunity for quiet and solitude.



CONSERVATION

This management area would provide users with a sense of being in a natural setting. Very few signs of development, such as homes, bridges, or agricultural fields, would intrude on this largely natural scene. The river and surrounding biological communites would dominate the user experience. The shoreline would not be disturbed by the few visible signs of development. Forest management would emphasize the undisturbed appearance. This area would provide many opportunities to view wildlife, and there would be abundant opportunites for angling. Access to the river would be limited to a few public carry-in and small craft access points and a very few riparian landowner private docks. Recreational support facilites (e.g., primitive campsites, trails) would be small, limited in number, and largely screened by natural vegetation. With few access points, small numbers of people and infrequent encounters, there would be ample opportunity for quite and solitude.

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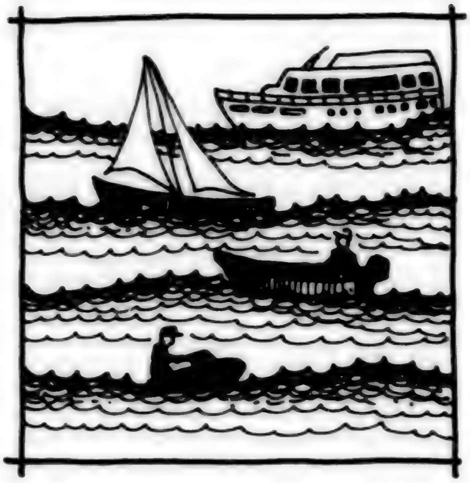
TABLE 1: SUMMARY OF LAND MANAGEMENT AREAS

LAND MANAGEMENT AREAS	Natural and manmade features	Landscape and shoreline	River access and support facilities	Numbers of people/encounter rate	Wildlife viewing opportunities	Noise levels
River Town	some natural features, scattered and limited in area, mostly manmade features	dominated by urban development, including shops, offices, historic, and residential structures	private and/or public river access and support facilities including marinas, docks, ramps (some of which may be large)	large numbers of people are often present, very high encounter rate	limited	may be high
Small Town	combination	developed, but less than river town, primarily large lot single family residential historic in character, portions of the shoreline would be largely undisturbed	public and private river access and support facilities, primarily small docks and ramps scattered along the river	although large crowds are unlikely, large numbers of people may be encountered	limited	moderate, typical of residential areas
Small Town Historic	combination	developed, but less than river town, primarily single family residential historic in character, portions of the shoreline would be largely undisturbed	public and private river access and support facilities, primarily small docks and ramps scattered along the river	although large crowds are unlikely, large numbers of people may be encountered	limited	moderate, typical of residential areas
Rural Residential	combination	sparsely developed, scattered farms and residences, little or no commercial development, no large concentrations of development, shoreline largely undisturbed	a few public and private river access and support facilities, primarily small docks and launches	small numbers, no large crowds, low encounter rate	abundant	moderate
Park	predominantly native vegetation, (includes natural features of special interest)	may have scattered concentrations of recreational support facilities (campsites, landings, trails, restrooms, picnic facilities, visitor centers), shoreline largely undisturbed	numerous opportunities for public access with support facilities	Large numbers of people may be present, likely very high encounter rate	abundant	moderate
Natural	largely undisturbed natural scene, variety of biological communities may be present	few signs of development (homes, agricultural fields, primitive campsites, trails) shoreline largely undisturbed	limited public and private access to the river, only a few primitive support facilities, public carry-in and small craft access	small number of users, low chance of encountering others	abundant	low
Minimally Disturbed	dominated by an undisturbed natural scene, variety of biological communities may be present	very few signs of development (homes, agricultural fields, primitive campsites, trails) shoreline almost totally undisturbed, support facilities screened by vegetation	very few public and private access points to the river and limited to primitive support facilities, public carry-in only	very limited number of users, very low chance of encountering others	greatest opportunities	very low
Conservation	sense of being in a natural setting; combination of park, natural, and minimally disturbed descriptions.	dominated by river and surrounding biological communities; shoreline would not be disturbed by few visible signs of development; forest management would emphasize undisturbed appearance	access limited to a few public carry-in and small craft access points and a few riparian landowner docks	small numbers of people and infrequent encounters; ample opportunity for quiet and solitude	abundant to greatest opportunities	moderate to very low

TABLE 2: SUMMARY OF WATER MANAGEMENT AREAS

Water Management Areas	Number of people	Opportunities for Solitude	Watercraft number	Watercraft type	Boat speeds	Boat speed controls	Water surface	Habitat	Noise levels
Active Social—peak times	high	low	high	variety, primarily motorized, including sailboats	vary significantly, including the river's highest allowable boat speeds	strictly controlled in some areas	commonly agitated; possibility of relatively large wakes/ waves	limited, especially during high use periods	likely to be high
Active Social—off peak times	moderate	Moderate	moderate				moderately agitated	ample/abundant	moderate
Moderate Recreation	moderate	moderate	moderate	variety, primarily motorized	vary, tending towards slower speeds	may be strictly controlled in some areas	moderately agitated	ample/ abundant	moderate
Quiet Waters—peak times	high	low	high	motorized and nonmotorized	low	restricted	largely undisturbed	abundant	consistently low
Quiet Waters—off peak times	low	high	low						
Natural Waters	low	high	low	variety, primarily human powered, nonmotorized	low	restricted	undisturbed	abundant	consistently low
Silent Boating	low	high	low	only nonmotorized	low to very low	no controls	undisturbed	abundant	consistently low

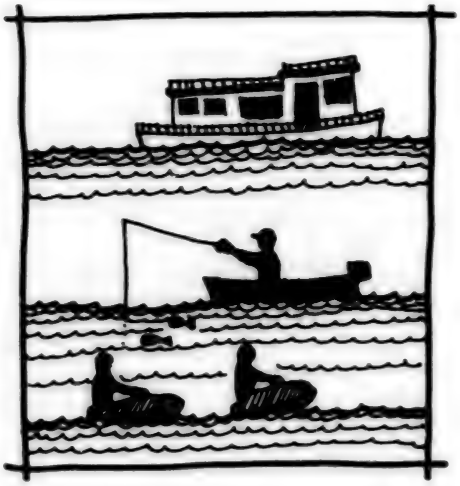


ACTIVE SOCIAL RECREATION

The user experiences and user management in this area would vary between peak times (i.e., summer weekends) and nonpeak times. During peak times on this section of the river people often would encounter large numbers of both people and watercraft; opportunities for solitude would be low. Users may experience high noise levels from sources on the water. The surface of the water would more commonly be agitated, with the possibility of relatively large wakes/waves. Human activity on the river surface would, at times, limit opportunities to fish in this area.

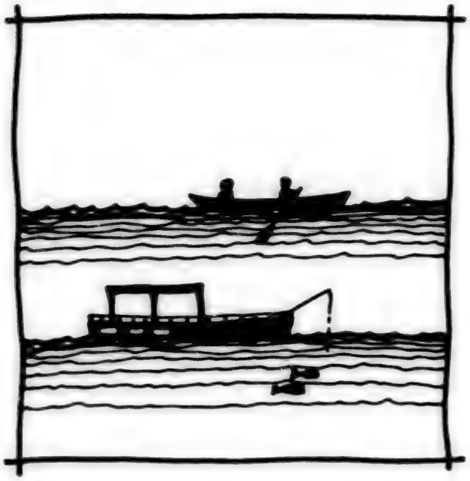
During nonpeak times users would encounter moderate numbers of people and boats; there would be moderate opportunities for solitude. Users may experience moderate levels of noise. The surface of the water would be commonly moderately agitated. However, during nonpeak times the area would offer abundant opportunities for angling.

The types of boats found in this area would vary widely during peak and nonpeak times: while most would be motorized, nonmotorized watercraft may be present. Boat speeds would also vary significantly; they would be strictly controlled in some limited areas, but the river's highest boat speeds would be allowed in this management area.



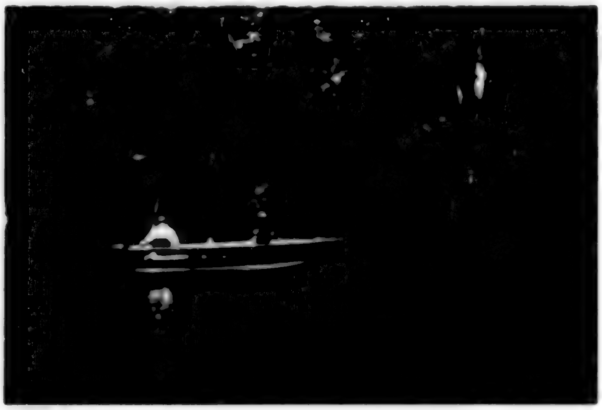
MODERATE RECREATION

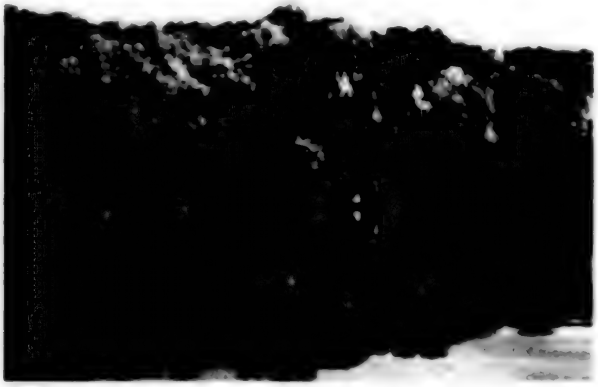
Users in this area would encounter moderate numbers of people and watercraft on the water. A variety of boat types, primarily motorized watercraft, might be present. Boats might travel at different speeds, but tend toward slower speeds. Boat speeds might be strictly controlled in certain places. Noise levels from sources on the water generally would be moderate. The area would offer abundant opportunities for angling.

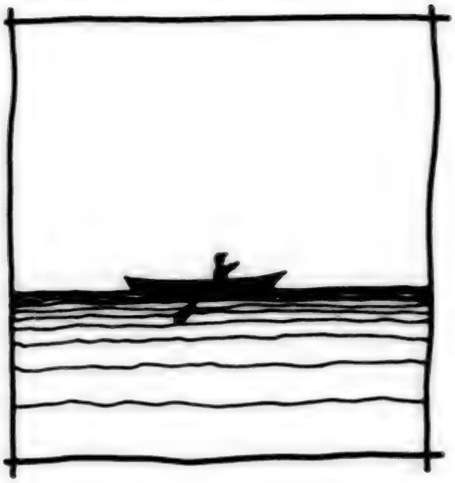


QUIET WATERS

Users in this area usually would encounter a small number of other people engaged in "low-impact" activities during nonpeak times, but during peak use periods (i.e., summer weekends) large numbers of other users and boats could be encountered. Opportunities for solitude consequently would vary from low opportunities during peak times to moderate opportunities during nonpeak times. Management would be directed toward recreational uses that leave the surface of the river largely undisturbed. Both motorized and nonmotorized watercraft would be able to use these areas. Watercraft speeds would be kept low to preserve the river's tranquil quality. Noise levels would be consistently low. Abundant opportunities for fishing would be available.

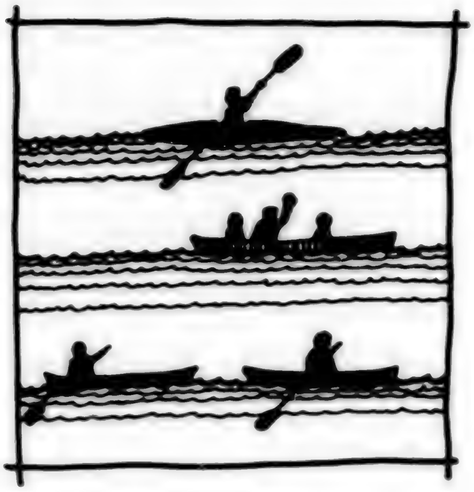






NATURAL WATERS

Users in this area would experience a sense of peace and quiet and could anticipate opportunities for solitude. The numbers of both users and watercraft would be low - users could anticipate a low probability of encountering other people on the water. Most watercraft would be human-powered. Watercraft speeds would be kept low to preserve the sense of a remote, backwater experience. Noise levels would be consistently low. There would be abundant opportunities for fishing.



SILENT BOATING

This management area would provide opportunities for users seeking silent, nonmotorized experiences where contact with the riverway's natural features would be maximized. Electric trolling motors would be permitted, but other motors could not be used in this area. Most use of this area would likely be by canoe, kayak, or inflatable boats. Users would encounter low numbers of other people, and noise levels would be minimal. There would be abundant opportunities for angling and viewing wildlife.

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Land and Water Use Alternatives

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BACKGROUND

As described in the Introduction, this plan has been jointly developed by the three managing agencies, with extensive assistance from a full range of diverse interests meeting as the Lower St. Croix Planning Task Force. This process began with recognition of the riverway's outstandingly remarkable values, development of two principle statements, development of four purpose statements, development of three significance statements, identification of eight exceptional resources and values, creation of a vision statement, and development of 13 planning assumptions.

The agencies (again with the assistance of the planning task force) then set about developing a range of alternatives, each of which would be consistent with those foundation statements. Two of the alternatives originally developed were later eliminated from detailed study because they were not consistent with those foundation statements. The remaining four alternatives are described in this chapter as alternatives A, B, C, and D along with the no-action alternative, which is alternative E.

The next step was development of a preferred alternative, which again needed to be consistent with the foundation statements. It was created in a series of public workshops to enable all of the riverway's diverse viewpoints to be heard. The outcome was, understandably, a compromise alternative. The three managing agencies do not have exactly the same mission or perspective on natural resource management, on private lands management, or on recreational use management. The riverway's public interests were even more varied. Some viewpoints were clearly outside the scope of the foundation statements so were not considered in development of the preferred alternative; views that fell under the umbrella of the foundation statements remained fairly diverse. In fact, accommodating multiple interests in the riverway, including diverse recreational uses, became a hallmark of the preferred alternative.

While there are many issues that confront managers of the riverway (see the "Issues" section) primary issues that drive management are development on lands within and adjacent to the riverway and the intensity of recreational use (including conflicts among users). Both of these issues result from the riverway's proximity to a large metropolitan area. These issues dominate management of the riverway and in turn drive all other management strategies. As a result, the alternatives are all described primarily in the context of land development controls and recreational boating management. While other resource management areas (rivers, forests, wilderness areas, etc.) might focus management on wildlands, unique vegetation, or certain animals, management of this riverway is driven primarily by people management; other resources can be managed only in the context of how human activity is managed.

PREFERRED ALTERNATIVE: PROTECT AND ENHANCE RIVERWAY'S DIVERSE CHARACTER

MANAGEMENT CONCEPT

One hallmark of the Lower St. Croix National Scenic Riverway is its diversity. Both its landscape character and its water-based recreation reflect diverse uses. Surface water recreation reflects the diversity of the surroundings: experiences range from the quiet solitude of a nonmotorized area to a very social and highly motorized environment. The preferred alternative would provide greater emphasis than ever to ensure continuation and enhancement of the Lower St. Croix National Scenic Riverway's diversity.

In the future it is likely that there will be increased demands for development within and adjacent to the lower riverway. This alternative would maintain long stretches of the lower riverway's natural and rural landscape, while allowing limited, planned, development in municipalities that is consistent with the historic character of the riverway's communities. Protection of natural resources, including the valley's important biological diversity, would be enhanced. Riverway users on the river would continue to find opportunities to engage in a wide range of recreational experiences. (Appendixes A and B respectively describe guidelines for suggested changes in the states' land use rules and water surface use regulations to achieve the above desired conditions.)

LAND USE

The "Preferred Alternative: Land" map on page 66 shows the location and distribution of management areas under the preferred alternative; table 3 shows the percentages of how much of the riverway would be included in each management area, while table 4 identifies the boundaries of the management areas. The management area allocation is intended to maintain long stretches of the river in a natural condition, while still allowing development in municipalities. As the figure and tables indicate, the majority of the lands along the riverway would be designated as rural residential (38%) and conservation (39%) management areas. Most of the conservation management areas would be north of Stillwater. The rest of the lands would be included in small town (12%), river town (5%), and small town historic (5%), management areas, all of which would be scattered throughout the riverway.

Under the preferred alternative limited new development could occur within existing municipalities along the riverway. In the river town management area, development would be guided by the community's underlying plans and ordinances. In the river town and small town historic management areas, new development would be allowed providing it was consistent with the historic character of the communities. New development also might be in the small town management areas, provided the existing large-lot, single-family character of the areas do not change. There are few industrial uses within the riverway; should an industrial site ever be abandoned, the most desirable future use of the riverfront portions of those properties would be public park.

PREFERRED ALTERNATIVE: LAND
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

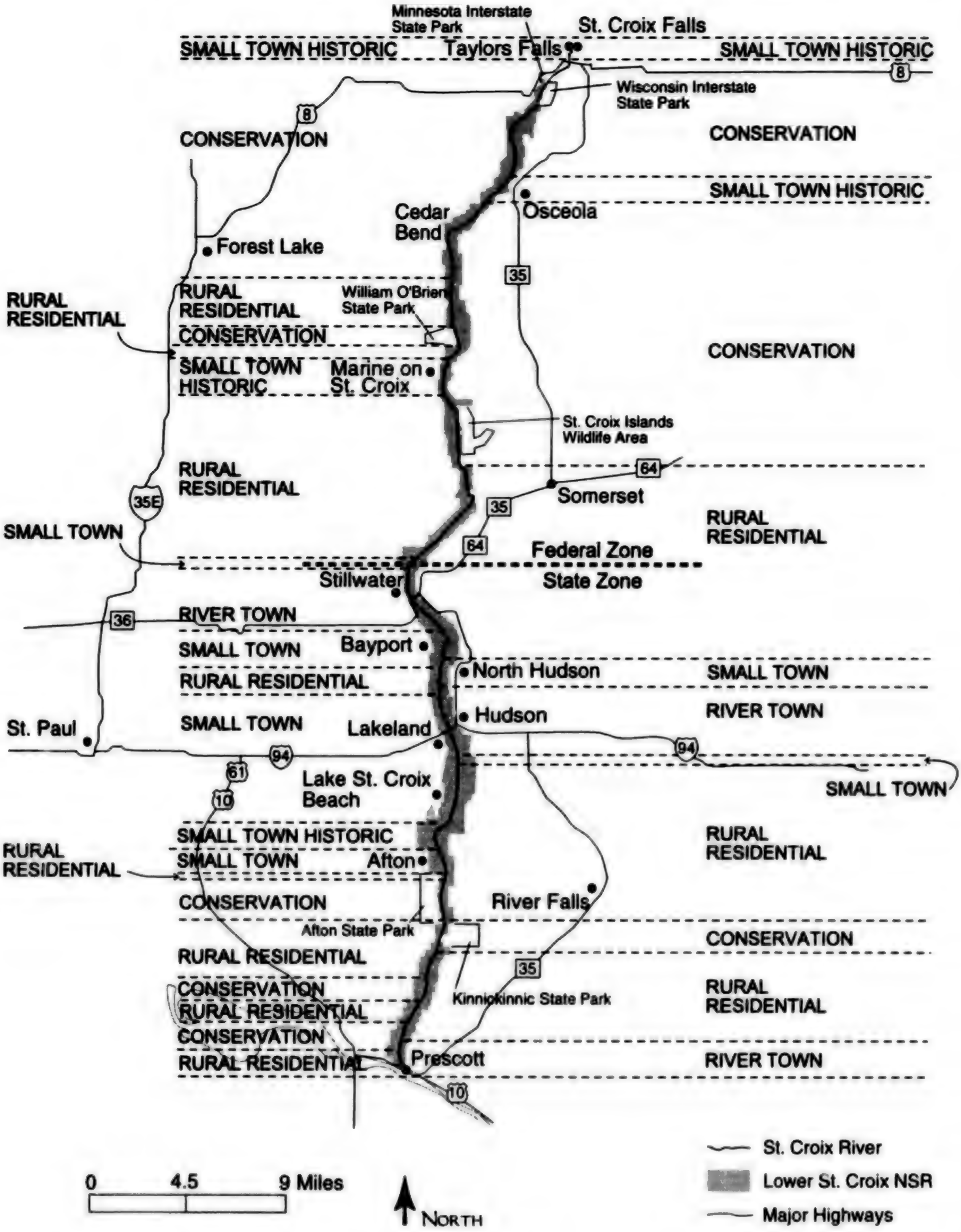

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TABLE 3: LAND MANAGEMENT AREA DISTRIBUTIONS (%) UNDER THE PREFERRED ALTERNATIVE

Management Area	Minnesota %	Wisconsin %	Overall Riverway %
River town	5	6	5
Small town historic	7	4	5
Small town	20	4	12
Rural residential	34	43	38
Conservation	35	43	39

Percentages may not add up to 100% due to rounding.

TABLE 4: LAND MANAGEMENT AREA BOUNDARIES IN THE PREFERRED ALTERNATIVE

Land Segment	Management Area
Minnesota	
Taylors Falls	Small town historic
Interstate Park to south end of McLeod's Slough	Conservation
South end of McLeod's Slough to north edge of William O'Brien State Park	Rural residential
William O'Brien State Park	Conservation
South end of William O'Brien State Park to southern tip of Greenburg Island in Marine-on-St. Croix	Rural residential
Southern tip of Greenburg Island in Marine-on-St. Croix to southern boundary of Marine-on-St. Croix's Butternut Falls Addition	Small town historic
Southern boundary of Marine-on-St. Croix's Butternut Falls Addition to north limits of Stillwater	Rural residential
North end of Stillwater to train station	Small town
Train station to north limits of Bayport	River town
Bayport	Small town
South limits to Bayport to Hudson railroad bridge	Rural residential
Hudson railroad bridge to north end of old Afton Village	Small town
Old Afton Village	Small town historic
South part of Afton: (north end of River Road to south end of river road)	Small town
South end of River Road in Afton to Afton State Park	Rural residential
Afton State Park	Conservation
South end of Afton State Park to north boundary of St. Croix Bluffs Regional Park	Rural residential
St. Croix Bluffs Regional Park	Conservation

Land Segment	Management Area
South end of St. Croix Bluffs Regional Park to north end of Carpenter Nature Center	Rural residential
Carpenter Nature Center	Conservation
South end of Carpenter Nature Center to the Mississippi River	Rural residential
Wisconsin	
St. Croix Falls	Small town historic
Interstate Park to north limits of Osceola	Conservation
Osceola	Small town historic
South end of Osceola to Arcola high bridge	Conservation
Arcola high bridge to the south edge of St. Croix Station subdivision in North Hudson	Rural residential
South edge of St. Croix Station subdivision to Orange Street	Small town
Orange Street to Mayer Road extended	River town
Mayer Road extended to Riverview Drive extended	Small town
Riverview Drive extended to north end of Kinnickinnic State Park	Rural residential
Kinnickinnic State Park	Conservation
South end of Kinnickinnic State Park to north end of Prescott	Rural residential
Prescott to the Mississippi River	River town

The emphasis in this alternative would be to ensure the overall character of the municipalities did not significantly change. Some state land use regulations would be relaxed in the river town, small town historic, and small town management areas to give local governments greater flexibility over land use. (See the guidelines in appendix A for further details on suggested changes to the states' existing land use regulations.)

Although there would be more flexibility than there is today in managing developments in municipalities, new developments and their effects would continue to be monitored within municipalities. To ensure that the character of the communities does not significantly change, and to help minimize impacts on adjacent rural areas, the riverway managing agencies would encourage local governments to cluster new development in the riverway towns. Local governments also would be encouraged to protect historic values in the river town and small town historic management areas through several methods. Examples of these methods would be adaptive reuse of existing historic structures, adoption and enforcement of historic preservation ordinances, and adoption of architectural standards that require new development to be consistent with the historic community character.

Outside municipalities, landowners would be encouraged to maintain the natural character of the landscape, particularly the blufflines, to the presettlement condition as seen from the water. Much of the land from Taylors Falls to just above the north limits of Stillwater would be designated as conservation. This stretch contains the least disturbed portions of the lower riverway. The conservation designation would help ensure that the natural character of this stretch is maintained (and restored where possible). Recreational structures, such as toilet buildings, on this stretch would be screened by vegetation where practical. Boat access points would continue to be designed primarily for carry-in use and launching of small boats.

Limited new developments could still be allowed in rural residential management areas, so long as they complied with land use regulations. (See the proposed state land use guidelines in appendix A for further details regarding new residential developments.) For Minnesota and Wisconsin Interstate State Parks and St. Croix Bluffs Regional Park, the emphasis would be on maintaining current conditions and uses. The northern unit of Minnesota Interstate State Park, the potholes-Glacial Garden area, is being managed toward a ca. 1890 historic vista. The southern unit is being managed in a more natural state. At William O'Brien State Park the emphasis would be on keeping the appearance of a natural landscape as seen from the water. For Afton and Kinnickinnic State Parks new facilities and development would be consistent with adjacent riverway land management area designations — no changes would occur in the overall natural/development character of these two parks.

VEGETATIVE MANAGEMENT

The primary goals for vegetative management would be to screen structures from view as seen from the river and prevent disturbance of environmentally sensitive areas such as steep slopes or riverfront bluffs.

A secondary goal would be to encourage and promote vegetative management actions that would maintain and restore historically and ecologically significant plant communities and enhance diversity. Successional climax forest and presettlement disturbed oak savanna would be the preferred forest ecotype examples of significant plant communities. However, throughout the lower riverway, vegetative screening of existing structures and potential development sites would take priority over restoration and maintenance of significant plant communities.

This alternative would place emphasis on voluntary actions, coupled with education and stewardship, to preserve and restore plant communities. Removal of exotic species would be encouraged on all lands within the riverway. Control of insects and disease would be recommended if there would be a high likelihood that outbreak would threaten large areas of vegetative cover within the lower riverway or threaten to infest adjacent lands. In addition, pruning or removal of hazard trees would continue to be allowed. Hazard trees would be trees that exhibit damage resulting from insect, disease, age, or storm, and, if they were to fall, would be a safety risk to people or property. Pruning of normal tree growth to prevent property damage would also be allowed.

On local government lands voluntary efforts would be encouraged to maintain and restore preferred forest cover. On state and federal lands the managing agencies would maintain and restore preferred forest types. Vegetation on NPS fee lands would continue to be managed in accordance with NPS policies to perpetuate native plant communities. Plant succession would generally not be interfered with except to protect life or property, convert existing tree plantations to nonmonocultures or mixed species communities, maintain native plant community diversity (e.g., prevent loss of prairie and oak savanna), and maintain habitat for threatened and endangered species. Manipulation of plant communities to maintain threatened and endangered species habitat would be carried out in a manner designed to restore or enhance the functioning of the plant and animal community of which the endangered species is a natural part.

On private lands voluntary efforts would also be encouraged to maintain and restore preferred forest cover so long as these efforts did not conflict with maintaining visual screening of existing structures and potential development sites. State regulations that restrict vegetation management on private lands would be revised to allow maintenance and restoration of the natural diversity and ecological integrity of significant plant communities. A variety of management techniques, such as planting, seeding, pruning, thinning, harvesting, prescribed burning, and clearing, would be allowed and encouraged on private lands in both states to accomplish this goal. Federal and state scenic easements would be revised on a volunteer basis with individual landowners to allow these management techniques.

A specific action that would be taken to encourage significant plant communities concerns lands enrolled under forest tax law programs on the Wisconsin side of the riverway. (Minnesota does not have an equivalent law regarding forest management.) Under this alternative the Wisconsin Department of Natural Resources would pursue an amendment to the state land use standards within the riverway (Chapter NR 118). Under the proposed amendment landowners could develop a forest management plan with department approval that would protect the scenic quality of the river, prevent disturbance of environmentally sensitive areas such as steep slopes or riverfront bluffs, and allow vegetation to be managed in a manner that would maintain significant plant communities.

RIVER CROSSINGS

Being a linear resource near a growing metropolitan area, there is frequent interest in building new crossings of the riverway. Crossings come in three forms: bridges for roads, railroads, pedestrians; overhead wires for communications and electrical energy; and under-river crossings (often called submarine crossings) for communications, electrical energy, and material such as fuel or natural gas.

The long-term goal for this alternative would be to reduce the number and size of visible river crossings. The managing agencies would encourage safe, compatible, multiple uses of existing corridors and structures that cross the riverway. All proposed changes to river crossings or corridors would require site-specific environmental evaluations and approval from applicable local, state, and federal agencies. The impacts of each proposal would be analyzed and documented before the managing agencies permit any change in a river crossing or corridor.

There would be no net increase in the number of transportation corridors. In general, transportation corridors would be replaced in or adjacent to the existing corridor. Existing transportation corridors could be relocated only if all of the following are true: 1) the need for the project is clearly justified, 2) the project is consistent with state and regional transportation plans, 3) there is no feasible and prudent alternative to relocating the corridor, and 4) all built elements of the existing corridor are removed and the corridor is restored to natural conditions. Existing corridors are defined as being roughly equivalent to the existing approach rights-of-way. Existing bridges could be replaced with new bridges provided that existing structures were removed.

Increased capacity within an existing transportation corridor could be expanded by widening an existing bridge or by constructing a parallel structure to an existing bridge so long as items 1 and 2 above are true.

Any new bridge or alteration of an existing bridge must be of a scale and character that minimizes impact to the values for which the area was designated under the National Wild and Scenic Rivers Act (scenic, recreational, geologic). Construction projects must include appropriate mitigation to compensate for any impact on these values.

Utility lines could be replaced and new lines could be added to existing crossings. In addition, new lines could be placed under existing bridges. However, no new utility corridors would be permitted to cross the river, and existing line towers could not be made larger. Consolidation of utility line crossings also would be encouraged.

Submarine crossings could be expanded (i.e., the size and number of lines could be increased) or relocated to an existing corridor. New submarine crossings also could be permitted provided there were no visual impacts. However, the crossing technique having the least impact on the riverway's outstandingly remarkable values and impact on the resource would be required. Natural vegetation would be maintained as much as possible along utility line rights-of-way that cross the riverway. Clearcutting of rights-of-way for pipeline inspections would be prohibited.

If any river crossing project would require any construction below the ordinary high water mark, the National Park Service would review the project, including the mitigation plan, pursuant to section 7 of the Wild and Scenic Rivers Act. The National Park Service would determine whether the project would or would not have a direct and adverse effect on the values for which the river was designated. If the NPS found that the project would result in a direct and adverse effect, no federal funding, licenses or permits would be issued for its construction.

ISLAND AND PUBLIC SHORELINE MANAGEMENT

North of Stillwater public day use of publicly owned islands and shoreline areas generally would continue.

Camping in the three state parks in the area would continue to be allowed only in designated campgrounds. On federal lands managed by the National Park Service, camping would continue to be prohibited in two areas:

- From Taylors Falls/St. Croix Falls to 1,200 feet south of Franconia Landing (the upper entrance to Close Slough)
- For 1,200 feet north and south of the Highway 243 bridge at Osceola

In addition, camping would continue to be prohibited from the southern tip of Greenburg Island to the upper entrance to Dead Man's Slough (opposite the city of Marine on St. Croix) until a comprehensive river use/camping management plan is completed. Once this plan is in place, camping might occur on this stretch of river at designated sites that would suit campers' needs only as long as there was no significant impact on the resource and adjacent riparian landowners.

On all other public lands north of Stillwater, several management actions could be instituted to minimize user conflict, to mitigate resource impacts, and to protect adjacent private landowner property rights. Each of the following management options could be instituted either individually or all at the same time, depending on local conditions.

Camping zones would be identified in a river use/camping management plan that might identify broad zones where camping could and could not occur. If this management option proved unsuccessful in preventing user conflicts and protecting cultural and natural resources and private landowner property rights, camping within a particular zone, or in all zones, would be restricted to designated sites only. When demand for sites exceeded the number of available sites, a reservation system could be instituted to allocate a certain number of sites in advance; other sites would remain first-come, first-served. In addition, the National Park Service could institute at any time, in compliance with national policy and regulations, a camper user fee system.

South of Stillwater, use of the Hudson Islands and day use of publicly owned shoreline areas would continue to be minimally regulated. To resolve sanitation problems on the Hudson Islands users would be required to have portable toilets to transport human wastes off the islands unless the managing agencies, local government, or volunteer organization provided public facilities for this purpose. Camping in the two state parks and one regional park in the area would continue to be allowed only in designated areas.

Regardless of other management strategies camping on all public areas would be subject to a seven-night stay limit at any one site and a 30-night limit for the entire summer season at all sites. Camping equipment also could not be left unattended for more than 24 hours.

WATER SURFACE USE

One of the unique characteristics of the Lower St. Croix National Scenic Riverway is the diversity of surface water recreational experiences users can find in a relatively small area, ranging from quiet solitude to faster or more social experiences. Under the preferred alternative river users would be assured of finding opportunities to engage in a variety of recreational experiences far into the future. In general, existing access to the riverway would not change. To provide opportunities for quiet solitude, watercraft would be required to operate at no-wake speed in all backwaters north of Stillwater. The main channel between Taylors Falls and the Arcola sandbar would provide a relatively quiet experience for nonmotorized and slow-moving motorized craft. Between the Arcola sandbar and the north limits of Stillwater, motorized and nonmotorized recreational boaters would continue to use the braided channel and wooded islands. Below the north limits of Stillwater, recreational users, primarily motorboaters, would continue to enjoy the open, lake-like section of the river. As motorboat densities increased, restrictions such as speed limits and slow no-wake zones, would be imposed to ensure safe conditions for all users and to minimize or avoid conflicts between different user activities. (See appendix B for suggested changes in the states' regulations that may be imposed on water users.)

The "Preferred Alternative: Water" map on page 74 and table 5 show the location and distribution of water management areas. In the preferred alternative all of the lower riverway above the north limits of Stillwater would be designated as natural, quiet, and moderate recreation management areas, while below the north limits of Stillwater the riverway would be designated as active social recreation waters. The active social recreation management area would cover the largest portion of the lower riverway's main channel (25 miles), followed by quiet waters (22 miles) and moderate recreation waters (5 miles). All backwaters north of Stillwater would be designated as natural waters (27 miles). The boundaries of the water management areas would be as follows from north to south:

Water Use Management From Taylors Falls to Arcola Sandbar

The main channel would be managed as quiet waters, while 22 miles of the backwaters would be managed as natural waters. This would help ensure that opportunities for quiet and solitude do not significantly change.

Water Use Management From Arcola Sandbar to the North Limits of Stillwater

All of the main channel in this stretch (5 miles) would be a moderate recreation management area, while the backwaters (5 miles) would be a natural waters management area. This allocation is intended to maintain existing recreational opportunities: the moderate management area would provide a variety of boat types, primarily powerboats, traveling at moderate speeds, while the natural waters designation would provide opportunities for quiet and solitude.

PREFERRED ALTERNATIVE: WATER
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

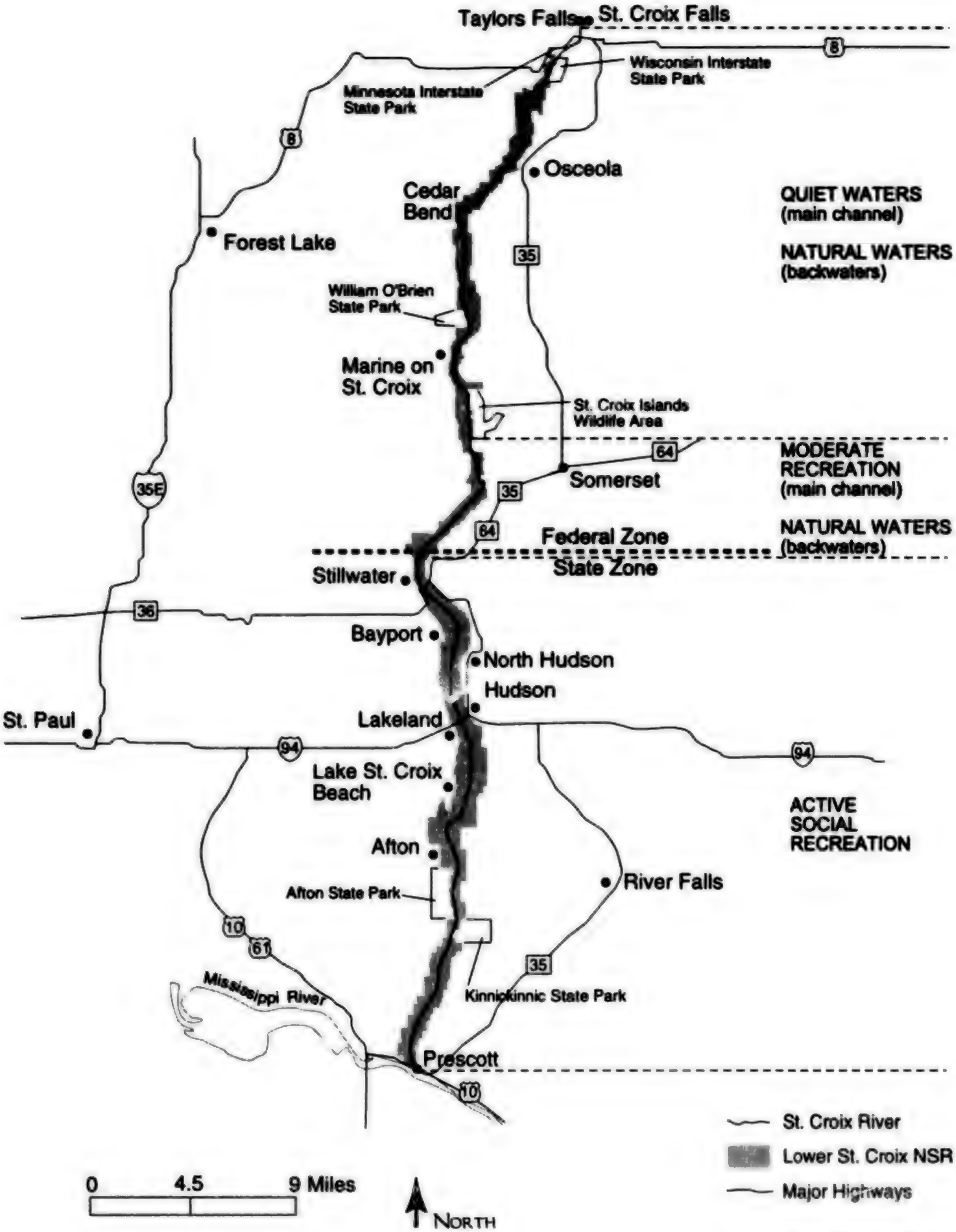

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TABLE 5: WATER MANAGEMENT AREA BOUNDARIES IN THE PREFERRED ALTERNATIVE

Area	Classification
Backwaters north of Stillwater	Natural
Main channel from Taylors Falls to Arcola sandbar	Quiet
Main channel from Arcola sandbar to north limits of Stillwater	Moderate
Stillwater to Prescott/Point Douglas	Active Social Recreation

Water Use Management From the North Limits of Stillwater to Prescott

All of this stretch (25 miles) would be designated as an active social recreation management area. Recreational users would be permitted to use powerboats and pursue a variety of recreational uses (including sailing and waterskiing). A speed limit for powerboats would be imposed to ensure boater safety and to enhance enjoyment of the scenic resource. One public access point would be added to this stretch, south of Stillwater near the Allan S. King power plant, in part replacing an access in Stillwater that is being closed.

NAVIGATION CHANNEL MAINTENANCE

In 1866 Congress authorized the U.S. Army Corps of Engineers to maintain a 3-foot navigation channel from Taylors Falls to the Mississippi River. Maintenance of the 3-foot channel was originally intended to provide a navigable channel for steamboats. Although some snag removal has been done since the end of the steamboat era on the St. Croix River around 1915, the Corps has not dredged the 3-foot channel since then and has not removed snags in recent years.

The U.S. Army Corps of Engineers (Corps) has not maintained the 3-foot navigation channel between Taylors Falls and the Arcola Sandbar (river mile 31.0) in many years. As a result, prevailing shallow water levels at the sandbar effectively limit the majority of motorboat use to that portion of the river south of the sandbar. Above the sandbar, use is a mix of canoes and motorboats, with predominantly canoe use north of Cedar Bend. These conditions would likely change if water levels changed at the sandbar.

To ensure that opportunities for a diversity of recreational experiences continued to be provided on the Lower St. Croix, it is important that channel maintenance does not resume north of the Arcola Sandbar. Thus, under the preferred alternative the managing agencies would recommend that Congress deauthorize the 3-foot navigation channel between the NSP dam and the Arcola Sandbar. The managing agencies would work with the Corps to pursue this change in legislation.

No changes would be proposed regarding the Corps' authority to maintain a 3-foot navigation channel from the Arcola sandbar down to river mile 24.5 at Stillwater. This would allow limited snag removal when necessary for safe motorized use.

The Corps is also authorized to maintain a 9-foot navigation channel from Stillwater (river mile 24.5) down to the confluence with the Mississippi River at Prescott.

While channel maintenance has historically involved dredging at Hudson, Catfish Bar, and the Kinnickinnic Narrows, the Corps' *Upper Mississippi River Channel Maintenance Management Plan* (U.S. Army Corps of Engineers 1997) indicates that only the Kinnickinnic Narrows is expected to require dredging over the next 40 years. Given this, under the preferred alternative the managing agencies would support continued maintenance of the navigation channel. No changes would be recommended to the channel's existing vertical clearance standards, which all existing bridges meet. However, the managing agencies would recommend that the Corps reduce the maintained channel width from 200 feet to 100 feet at the Kinnickinnic Narrows. A mussel survey would be required before maintenance dredging could occur at the Kinnickinnic Narrows. Dredged material would continue to be placed where it could be reused for beneficial purposes while minimizing impacts to aquatic resources, as described in the *Upper Mississippi River Channel Maintenance Management Plan*. Any watercraft entering the riverway to conduct dredging activities and buoy-tending would be checked and cleaned if necessary in a manner consistent with the zebra mussel prevention plan.

CULTURAL RESOURCES MANAGEMENT

For the purposes of this plan, cultural resources are museum objects, historic properties listed on the National Register of Historic Places, or properties that are eligible for listing on the register. Historic properties on or eligible for listing on the national register include archeological sites, or historic buildings, structures, objects, sites, and districts. In addition to national register properties, cultural resources are also traditional cultural properties (including those associated with American Indians) and historic landscapes (both designed and vernacular). The lower riverway and adjoining areas include properties currently listed on the national register, properties determined to be eligible for listing on the register, and some properties that have been identified but not yet evaluated. (See appendix F for a list of properties that are either on the national register or eligible for listing.) Cultural resources within the riverway boundary are located on NPS fee land, nonfederal public land, private land (including parcels with NPS scenic easements), and potentially in the river itself (e.g. shipwrecks, other submerged resources).

The National Park Service currently has several efforts underway to identify and evaluate historic buildings, structures, and landscapes in the riverway. These include: a historic resource study, to establish the broad historic context of the region; the List of Classified Structures, which evaluates NPS-owned properties; and the cultural landscape inventory, which identifies and evaluates significant cultural landscapes in and adjacent to the riverway. Other efforts currently underway are a cultural sites inventory and an archeological and ethnographic overview and assessment. These efforts focus solely on the portion of the lower riverway administered by the National Park Service and on historic properties located on National Park Service fee lands.

In the preferred alternative the managing agencies would work together to inventory, evaluate, and protect the riverway's cultural resources. All three managing agencies should better utilize their own internal expertise on cultural resource issues to better protect the riverway's cultural resources. The National Park Service would continue its efforts to identify and evaluate historic buildings, structures, cultural landscapes, archeological and ethnographic resources, and other cultural sites on the federally administered portion of the lower riverway in the state-administered portion of the riverway. The Minnesota and Wisconsin state historic preservation offices, American Indian interests, and private property owners would be responsible for the identification, preservation and interpretation of historic properties. The National Park Service would support this effort by performing research on the historic contexts of the region. National Park Service staff would work with these groups where appropriate in developing protection and treatment strategies and priorities. Property owners and managing partners would work together to develop challenge cost share grants and other cooperative ventures to preserve historic properties throughout the state-administered zone. The National Park Service would assist the state historic preservation offices in promoting the identification, evaluation and protection of historic properties by local governments, landowners and private institutions in areas that visually affect the river outside the riverway boundary.

Previously unidentified archeological sites might be encountered as the result of future excavations or other ground disturbances. Archeological surveys would precede any future ground disturbing activities undertaken by the managing agencies. These surveys would be conducted under the provisions of section 106 of the National Historic Preservation Act, in consultation with the Minnesota or Wisconsin state historic preservation offices. While section 106 typically applies only to federal actions, in this case actions by the state managing agencies within the riverway would voluntarily comply with the spirit of section 106, following procedures to be developed in cooperation with the state historic preservation office and consistent with state statutes and rules.

Local governments would be strongly encouraged and relied upon to play a key role in protecting historic properties. The managing agencies, in cooperation with the state historic preservation offices and local preservation organizations, would encourage local government efforts. These actions would include historic preservation measures in county comprehensive plans and other regional plans; establishment of local historic preservation ordinances; participation in the certified local government program administered by the state historic preservation offices; and development of incentives (e.g., grants, loans, tax breaks) for the rehabilitation of historic buildings or preservation of archeological sites. The managing agencies also would increase their efforts to educate the public on the value of the lower riverway's cultural heritage.

Under the preferred alternative, local governments would be required to adopt and enforce historic preservation ordinances and historic-theme architectural standards for use in the river town and small town historic districts.

LAND PROTECTION/BOUNDARY ADJUSTMENTS

Land Protection

The goals for riverway land protection are to protect the ecological integrity, scenic character, geologic resources, and cultural and historic resources of lands within the boundary of the Lower St. Croix National Scenic Riverway while providing for public use and enjoyment. The National Park Service has essentially completed acquiring land and interests in land as identified in the *Land Protection Plan* for the federally administered zone. The state DNRs would provide the opportunity for landowners to participate in a variety of land protection programs, such as forest stewardship plans and other land stewardship programs. Land protection needs and opportunities for areas outside the riverway that affect the integrity and character of the riverway would be addressed in the *Watershed Stewardship Initiative*.

The following tools and opportunities could be used in developing the land protection program:

- At a minimum, local zoning in conformance with state minimum standards would continue to apply to all lands within the riverway, as published in the *Federal Register* between the dam at St. Croix Falls/Taylors Falls, and the confluence with the Mississippi River. (The state departments of natural resources would pursue revision of the state minimum standards based on the suggested land use guidelines in appendix A.)
- Agencies would evaluate alternative methods of protection other than acquisition (e.g., cooperative agreements, environmental regulations, local zoning ordinances, private land stewardship). There would be support for greater use of land trusts and other nonregulatory and nongovernmental land protection methods.
- Agencies would renegotiate scenic easements where needed to include provisions for natural and cultural resource protection and modifications of vegetation management practices.
- NPS and state ownership of lands north of Stillwater might be modified to improve administration.
- Agencies would encourage inclusion of historic preservation measures in county comprehensive plans and other regional plans and establishment of local historic preservation ordinances.
- Agencies would encourage state and local incentives (e.g., grants, loans, tax breaks) for the rehabilitation of historic buildings or preservation of archeological sites.

The land protection program for the lower riverway addresses only those lands within the authorized boundary of the riverway. However, lands outside the riverway are also integral to the integrity and character of the riverway. The *Watershed Stewardship Initiative* will address land protection opportunities in the greater watershed.

Boundary Adjustments

There is a small gap in the boundary on the north edge of Wisconsin's St. Croix Islands Wildlife Area resulting from an error in the original delineation of the riverway boundary. The riverway boundary would be extended to cover this area. Another minor boundary adjustment has been proposed in Bayport to remove part of a residential area that is not near the river.

If other minor boundary adjustments were identified, they would be referred to the Lower St. Croix Management Commission for review and possible boundary adjustments.

ALTERNATIVE A: DIRECTED LAND DEVELOPMENT AND INCREASED RECREATIONAL USE LEVELS

MANAGEMENT CONCEPT

As in the preferred alternative, the managing agencies would seek to maintain long stretches of the lower riverway's natural and rural landscape, while allowing limited, planned, development within the riverway boundary that was consistent with the historic character of the riverway's communities. Alternative A would differ from the preferred alternative in that a greater proportion of the lower riverway would be included in the river town, small town historic, or small town management areas. Users on the river would continue to find opportunities to engage in a wide range of recreational experiences. Unlike the preferred alternative, as long as users were not causing significant damage to the riverway's exceptional resources or posing safety hazards to others, no efforts would be made to regulate user activities.

LAND USE

The "Alternative A: Land" map on page 81 shows the location and distribution of management areas under this alternative; table 6 shows the percentages of how much of the riverway would be included in each management area, while table 7 identifies the boundaries of the management areas. The management area allocation is intended to maintain long stretches of the river in a natural condition, while still allowing development in the existing municipalities and areas adjacent to the municipalities. As the figure and tables indicate, the majority of the lands along the riverway would be designated as rural residential (34%) and natural (32%) management areas, although most of the natural management areas would be north of Stillwater. The remaining lands would be included in small town, park, river town, and small town historic management areas, all of which would be scattered throughout the riverway.

Limited new residential and commercial development could occur within the municipalities along the riverway. In the river town and small town historic management areas new development would be allowed provided it was consistent with the historic character of the communities. New development also could occur in the small town management areas, provided the large-lot, single-family character of the areas did not change. There are few industrial uses within the riverway; should an industrial site ever be abandoned, the most desirable future use of the riverfront portions of those properties would be public park.

The emphasis in this alternative would be to ensure that the overall character of the communities did not significantly change. Consequently, there would be less control by the riverway managing agencies on specific developments within the municipalities compared to the present. Some state land use regulations would be relaxed in the river town, small town historic, and small town management areas to give local governments greater flexibility over land use, development density, structure height, etc. Standards regarding such features as decks and residential additions also would be relaxed in the small town management areas.

ALTERNATIVE A: LAND
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

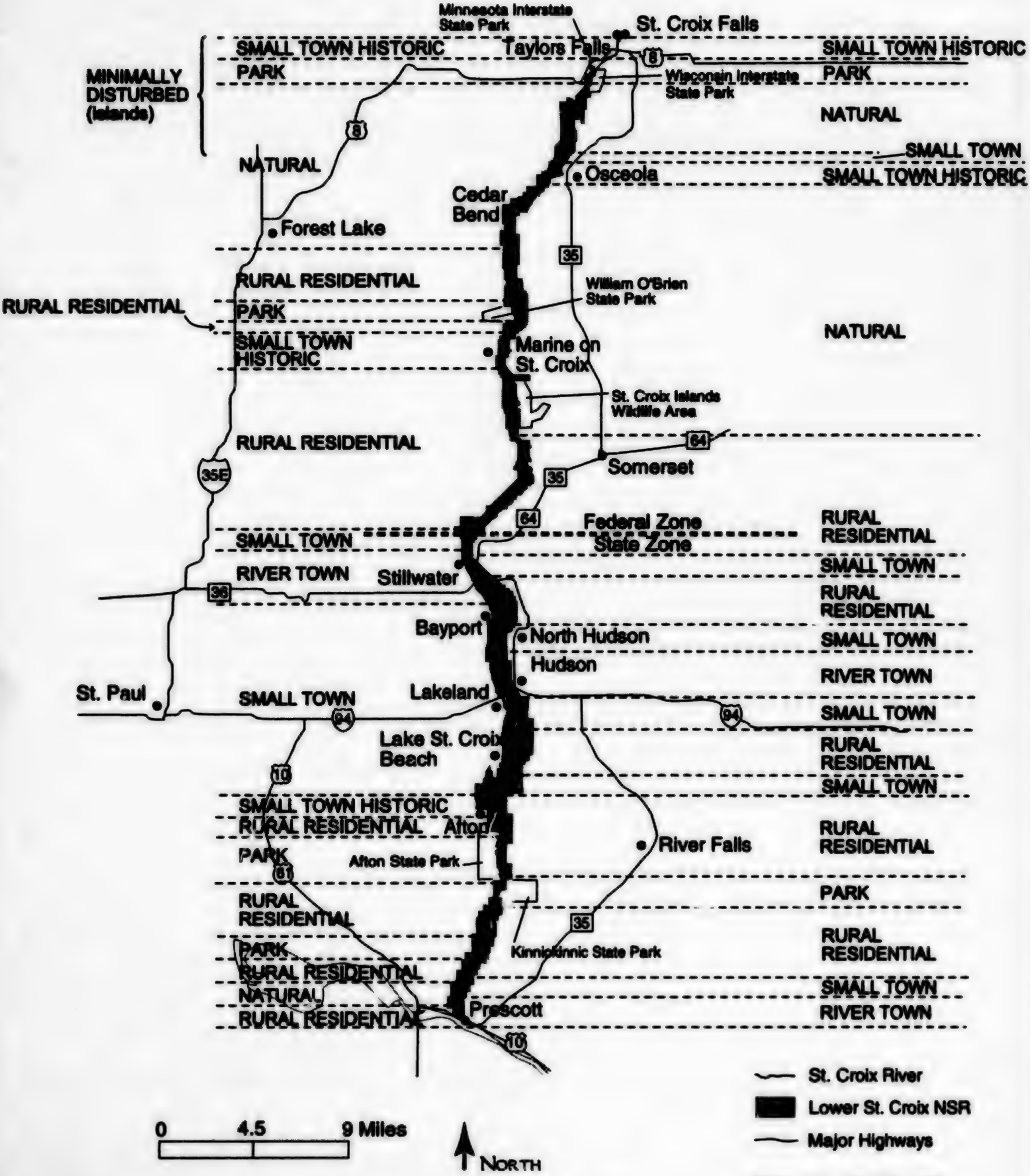

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TABLE 6: LAND MANAGEMENT AREA DISTRIBUTIONS (%) UNDER ALTERNATIVE A*

Management Area	Minnesota (%)	Wisconsin (%)	Overall Riverway (%)
River Town	7	4	5
Small Town Historic	6	4	5
Small Town	19	10	14
Rural Residential	33	35	34
Park	14	6	10
Natural	22	42	32
Minimally Disturbed	0	0	0

*Percentages do not necessarily add up to 100% due to rounding.

TABLE 7: LAND MANAGEMENT AREA BOUNDARIES IN ALTERNATIVE

Land Segment	Management Area
Minnesota	
Taylors Falls	Small town historic
Interstate Park	Park
South end of Interstate Park to south end of McLeod's Slough	Natural
South end of McLeod's Slough to north end of William O'Brien State Park	Rural residential
William O'Brien State Park	Park
South end of William O'Brien State Park to southern tip of Greenburg Island in Marine-on-St. Croix	Rural residential
Southern tip of Greenburg Island in Marine-on-St. Croix to southern boundary of Marine-on-St. Croix's Butternut Falls Addition	Small town historic
Southern boundary of Marine-on-St. Croix's Butternut Falls Addition to north limits of Stillwater	Rural residential
North limits of Stillwater to the south end of Dutch Town	Small town
South end of Dutch Town to north end of Bayport	River town
North limits of Bayport to north limits of old Afton Village	Small town
Old Afton Village	Small town historic
South end of old Afton Village (north end of River Road) to north end of Afton State Park	Rural residential

Land Segment	Management Area
Afton State Park	Park
South end of Afton State Park to north boundary of St. Croix Bluffs Regional Park	Rural residential
St. Croix Bluffs Regional Park	Park
South end of St. Croix Bluffs Regional Park to north end of Carpenter Nature Center	Rural residential
Carpenter Nature Center	Natural
South end of Carpenter Nature Center to Mississippi River	Rural residential
Wisconsin	
St. Croix Falls	Small town historic
Interstate Park	Park
South end of Interstate Park to north limits of Osceola	Natural
Osceola	Small town historic
South end of Osceola to north end of Twin Springs subdivision	Natural
North end of Twin Springs subdivision to south edge of St. Croix Station subdivision in North Hudson	Rural residential
South edge of St. Croix Station subdivision in North Hudson to Orange Street	Small town
Orange Street to I-94 bridge	River town
I-94 bridge to YMCA Camp	Small town
YMCA Camp to north end of Kinnickinnic State Park	Rural residential
Kinnickinnic State Park	Park
South end of Kinnickinnic State Park to north end of Cedar St. Croix subdivision	Rural residential
North end of Cedar St. Croix subdivision to north end of Prescott	Small town
North end of Prescott to Mississippi River	River town

Although there would be more flexibility in managing developments in municipalities in alternative A, the riverway managing agencies would continue to monitor new development within the communities and their effects. To ensure that the character of the municipalities did not significantly change, and to help minimize impacts on adjacent rural areas, the riverway management areas would encourage local governments to cluster new development in the riverway towns. Local governments also would be encouraged to protect historic values in the river town and small town historic management areas through several methods. Examples would include adaptive reuse of existing historic structures, adoption and enforcement of historic preservation ordinances, and adoption of architectural standards that require new development to be consistent with the historic community character.

In areas outside municipalities, limited new developments would continue to be allowed, some of which may be visible from the river, so long as the riverway's rural and natural character is maintained. Specifically, limited new residential and commercial development could occur in rural residential management areas, limited residential development could occur in natural management areas, and some recreational facilities could be built in the park and natural management areas.

VEGETATIVE MANAGEMENT

Under this alternative, more development would be expected to occur along the riverway, and more native plant communities likely would be altered. Consequently, the riverway managing agencies would seek to minimize decreases in the coverage (acreage) of plant communities. Losses due to development would be minimized by educating landowners, encouraging development in areas that have already been disturbed, limiting the "footprint" of the development, and encouraging developers to replant native vegetation.

As described under the preferred alternative, the primary goals for vegetative management would be to screen structures from view as seen from the river and prevent disturbance of environmentally sensitive areas such as steep slopes or riverfront bluffs.

A secondary goal would be to encourage and promote vegetative management actions that would maintain historically and ecologically significant plant communities and diversity. Successional climax forest and pre-settlement disturbed oak savanna would be the preferred forest ecotype examples of significant plant communities. However, throughout the lower riverway, vegetative screening of existing structures and potential development sites would take priority over restoration and maintenance of significant plant communities.

This alternative would place emphasis on voluntary actions, coupled with education and stewardship, to preserve plant communities. Removal of exotic species would be encouraged on all lands within the riverway. Control of insects and disease would be recommended if there would be a high likelihood that outbreak would threaten large areas of vegetative cover within the lower riverway or threaten to infest adjacent lands. In addition, pruning or removal of hazard trees would continue to be allowed. Hazard trees would be trees that exhibit damage resulting from insect, disease, age, or storm, and, if they were to fall, would be a safety risk to people or property. Pruning of normal tree growth to prevent property damage would also be allowed.

On local government lands voluntary efforts would be encouraged to maintain preferred forest cover. On state and federal lands the managing agencies would maintain and restore preferred forest types. Vegetation on NPS fee lands would continue to be managed in accordance with

NPS policies to perpetuate native plant communities. Plant succession would generally not be interfered with except to protect life or property, convert existing tree plantations to nonmonocultures or mixed species communities, maintain native plant community diversity (e.g., prevent loss of prairie and oak savanna), and maintain habitat for threatened and endangered species. Manipulation of plant communities to maintain threatened and endangered species habitat would be carried out in a manner designed to restore or enhance the functioning of the plant and animal community of which the endangered species is a natural part.

On private lands voluntary efforts would also be encouraged to maintain and restore preferred forest cover so long as these efforts do not conflict with maintaining visual screening of existing structures and potential development sites. State regulations that restrict vegetation management on private lands would be revised to allow maintenance and restoration of the natural diversity and ecological integrity of significant plant communities. A variety of management techniques, such as planting, seeding, pruning, thinning, harvesting, prescribed burning, and clearing, would be allowed and encouraged on private lands in both states to accomplish this goal. Federal and state scenic easements would be revised on a volunteer basis with individual landowners to allow these management techniques.

A specific action that would be taken to encourage significant plant communities concerns lands enrolled under forest tax law programs on the Wisconsin side of the riverway. (Minnesota does not have an equivalent law regarding forest management but this action.) Under this alternative the Wisconsin Department of Natural Resources would pursue an amendment to the state land use standards within the riverway (Chapter NR 118). Under the proposed amendment, landowners could develop a forest management plan with department approval that would protect the scenic quality of the river, prevent disturbance of environmentally sensitive areas such as steep slopes or riverfront bluffs, and would allow vegetation to be managed in a manner that would maintain and restore significant plant communities.

RIVER CROSSINGS

In alternative A the managing agencies would encourage safe, compatible, multiple uses of existing corridors and structures that cross the riverway. All proposed changes to river crossings or corridors would require site-specific environmental evaluations. The impacts of each proposal would be analyzed and documented before the managing agencies would permit any change in a river crossing or corridor.

There would be no increases in the number of road or railroad bridges in alternative A. However, the scale and character of existing bridges could be altered so long as the scale and character was still in keeping with the values for which the area was designed under the Wild and Scenic Rivers Act. Bridges could be made wider to provide for increased capacity with more lanes. Road and railroad bridges could be replaced with new bridges, provided the existing structures were removed. (Agencies proposing to replace structures on the National Register of Historic Places or replace structures that are eligible for listing would need to comply with section 106 of the National Historic Preservation

Act before they could remove the structures.) Road and railroad bridges also could be relocated to new sites, as long as the existing structures are removed.

Utility lines could be replaced with the removal of the existing structures. Existing transmission lines also could be increased in scale (e.g., larger towers, more cables, or thicker cables could be installed) or relocated to new sites.

Submarine crossings could be expanded (i.e., the size and number of lines could be increased) or relocated. New submarine crossings also could be permitted. Trenching or directional drilling may be required for all new submarine crossings, depending on the resource impacts. Natural vegetation would be maintained as much as possible along utility line rights-of-way that cross the riverway. Clearcutting of rights-of-way for pipeline inspections would be prohibited.

ISLAND AND PUBLIC SHORELINE MANAGEMENT

North of Stillwater public use of publicly owned islands and shoreline areas generally would be minimally regulated except for camping. Camping in the three state parks in the area would continue to be allowed only in designated campgrounds. On federal lands managed by the National Park Service, camping would continue to be prohibited in two areas:

- from Taylors Falls/St. Croix Falls to 1,200 feet south of Franconia Landing (the upper entrance to Close Slough)
- for 1,200 feet north and south of the Highway 243 bridge at Osceola

Camping would continue to be allowed in other public areas, subject to a seven-night limit at any one site and a 30-night limit for the entire summer season at all sites. Camping equipment also could not be left unattended for more than 24 hours.

South of Stillwater use of the Hudson Islands and day use of publicly owned shoreline areas would continue to be minimally regulated. Camping in the two state parks and one regional park would continue to be allowed only in designated areas.

WATER SURFACE USE

On the water surface, increased recreational use would be permitted along some stretches below Arcola, as long as the riverway's exceptional resource values were not compromised and safety hazards did not occur. There would be increased opportunities for social activity (e.g., more access for motorboats) on designated parts of the river.

The "Alternative A: Water" map on page 87 and table 8 show the location and distribution of water management areas. The largest portion of the lower riverway in alternative A would be designated as active social recreation (30 river miles), followed by quiet waters (22 miles of the main channel and 5 miles of backwaters) and natural waters (22 miles of backwaters). This management area allocation would allow additional recreational use (particularly social, motorized uses) below the north limits of Stillwater, while still providing opportunities for quieter nonmotorized uses above the Arcola sandbar. Mixed uses would occur between the Arcola sandbar and the north limits of Stillwater.

ALTERNATIVE A: WATER
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

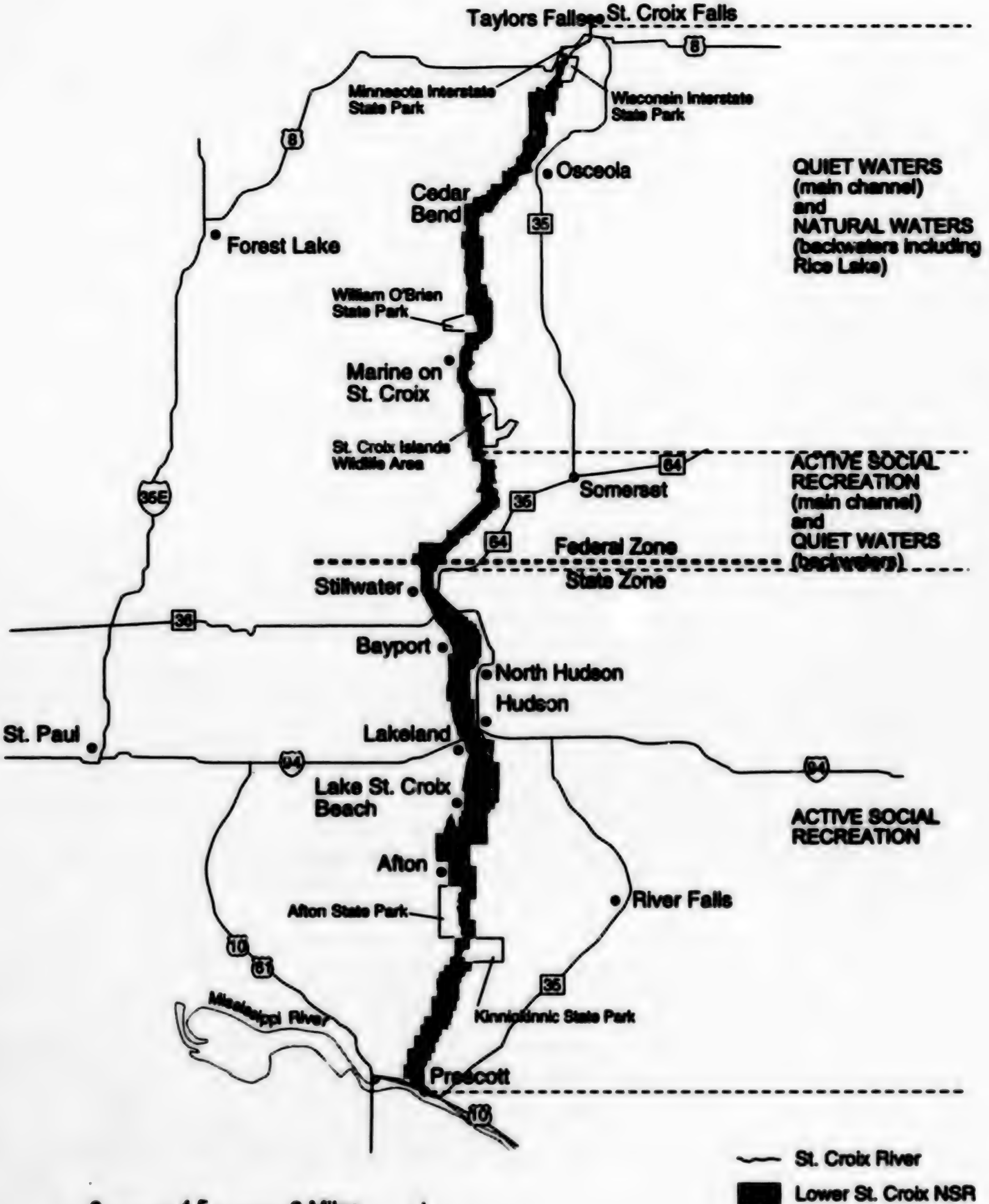

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TABLE 8: WATER MANAGEMENT AREA BOUNDARIES IN ALTERNATIVE A

Water Segment	Management Area
The main channel from the Taylors Falls Dam south to Arcola sandbar	Quiet waters
The backwaters from the Taylors Falls Dam south to the Arcola sandbar	Natural waters
The main channel from the Arcola sandbar to the north limits of Stillwater	Active social recreation
The backwaters from the Arcola sandbar to the north limits of Stillwater	Quiet waters
The north limits of Stillwater to the Prescott railroad bridge	Active Social Recreation

Water Use Management From Taylors Falls to Arcola Sandbar

On this stretch of the riverway the main channel (22 miles) would be managed as quiet waters and the backwaters (22 miles) would be managed as natural waters. Management of boating on this stretch would continue: limited growth in use levels would be allowed; opportunities for quiet and solitude would be maintained, current speed levels would be maintained, and access opportunities would continue.

Water Use Management From Arcola Sandbar to the North Limits of Stillwater

All of the main channel (5 miles) in this stretch would be an active social recreation management area and all of the backwaters 5 miles) would be in a quiet waters management area. Under alternative A the riverway managing agencies would increase opportunities for more people to pursue a variety of uses. Speed levels also would be permitted to increase, provided there were no safety concerns. No changes in access to this stretch would occur.

Water Use Management From the North Limits of Stillwater to Prescott

All of this reach of the Lower St. Croix (25 miles) would be an active social recreation management area. Additional opportunities would be available for large numbers of people to engage in a variety of recreational uses under alternative A. To accommodate more people, access opportunities would be increased, such as by providing more parking spaces at existing landings, providing more launch ramps, or allowing marinas to increase their boat slips. Speed levels also would be permitted to increase, provided there were no safety concerns.

Three of the management actions described in the preferred alternative would also be implemented in alternative A: the navigation channel maintenance, cultural resource management, and land protection/boundary adjustments management actions are identical under both alternatives. Please refer to the preferred alternative to see these three management actions.

ALTERNATIVE B: ACCOMMODATE GROWTH BUT MAINTAIN THE LANDSCAPE'S VISUAL QUALITIES AND MINIMIZE RECREATIONAL USE CONFLICTS

MANAGEMENT CONCEPT

Alternative B would stress maintaining the natural/rural/town landscape areas within the riverway boundary and maintaining the present diversity of water recreational experiences as much as possible. However, the overall level of recreational use would be allowed to increase along with the expected population growth in the riverway region.

LAND USE

In alternative B lands within the riverway boundary would be managed to maintain the current landscape character. Thus, existing rural residential and natural conditions along the river would be maintained. However, this alternative would not be a complete freeze on new development: more residential development could occur within the riverway boundary so long as it was not visible from the water.

The allocation of land management areas in alternative B is intended to maintain existing visual conditions along the riverway. As the "Alternatives B and C: Land" map on page 91 and tables 9 and 10 show, the majority of the lands along the riverway would be designated as rural residential (36%) and natural (38%) management areas. Rural residential areas would be scattered along the river, primarily south of Marine-on-St.-Croix. Most of the natural management areas would be north of Stillwater, but a few would be designated on the lower stretch, adjacent to state parks or nature centers. The rest of the lands would be included in small town, park, river town, and small town historic management areas, all of which reflect current conditions along the riverway.

New residential and commercial development could be built within the municipalities along the riverway, provided it was not visible from the river. Additional state restrictions (e.g., setback and height requirements) would be placed on new development to minimize the visual impact on the landscape. In the river town and small town historic management areas new development would only be allowed if it was consistent with the historic character of the communities. New development also could occur in the small town management areas, provided the existing large-lot, single-family character of the areas did not change. There are few industrial uses within the riverway; should an industrial site ever be abandoned, the most desirable future use of the riverfront portions of those properties would be public park.

Although this alternative generally would impose more restrictions on new development than now, an exception would be made for small town management areas: some state land use regulations would be eased for small town management areas to give local governments and landowners greater flexibility. Specifically, state standards regarding decks and residential additions would be relaxed in the small town management areas, provided the additions were not visible from the water.

ALTERNATIVE B AND C: LAND
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

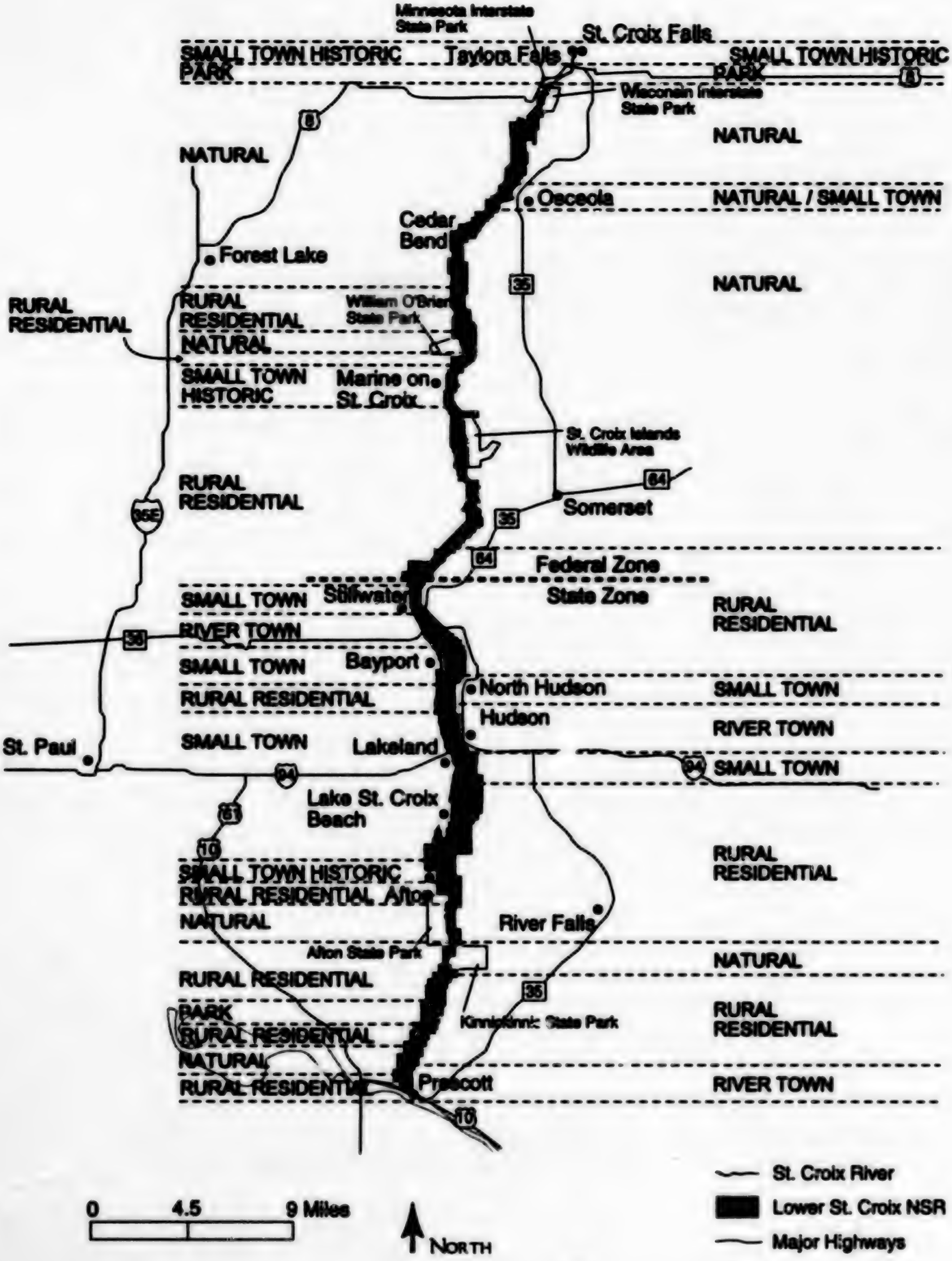

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TABLE 9: LAND MANAGEMENT AREA DISTRIBUTIONS (%) UNDER ALTERNATIVE B

Management Area	Minnesota (%)	Wisconsin (%)	Overall Riverway (%)
River Town	6	4	5
Small Town Historic	6	2	4
Small Town	17	9	13
Rural Residential	36	36	36
Park	6	4	5
Natural	30	46	38
Minimally Disturbed	0	0	0

*Percentages do not necessarily add up to 100% due to rounding.

TABLE 10: LAND MANAGEMENT AREA BOUNDARIES IN ALTERNATIVE B

Land Segment	Management Area
Minnesota	
Taylors Falls	Small town historic
Interstate Park	Park
South end of Interstate Park to south end of McLeod's Slough	Natural
South end of McLeod's Slough to north end of William O'Brien State Park	Rural residential
William O'Brien State Park	Natural
South end of William O'Brien State Park to southern tip of Greenburg Island in Marine-on-St. Croix	Rural residential
Southern tip of Greenburg Island in Marine-on-St. Croix to southern boundary of Marine-on-St. Croix's Butternut Falls Addition	Small town historic
Southern boundary of Marine-on-St. Croix's Butternut Falls Addition to north limits of Stillwater	Rural residential
North limits of Stillwater to train station	Small town
Train station to north limits of Bayport	River town
Bayport	Small town
South limits of Bayport to Hudson railroad bridge	Rural residential
Hudson railroad bridge to north end of old Afton Village	Small town
Old Afton Village	Small town historic
South end of old Afton Village (north end of River	Rural residential

Land Segment	Management Area
Road) to north end of Afton State Park	
Afton State Park	Natural
South end of Afton State Park to north boundary of St. Croix Bluffs Regional Park	Rural residential
St. Croix Bluffs Regional Park	Park
South end of St. Croix Bluffs Regional Park to north end of Carpenter Nature Center	Rural residential
Carpenter Nature Center	Natural
South end of Carpenter Nature Center to Mississippi River	Rural residential
Wisconsin	
St. Croix Falls	Small town historic
Interstate Park	Park
South end of Interstate Park to Twin Springs subdivision, including the bluffs within Osceola	Natural
Osceola	Small town historic
Osceola to Twin Springs subdivision	Natural
Twin Springs subdivision to south edge of St. Croix Station subdivision in North Hudson	Rural residential
South edge of St. Croix Station subdivision in North Hudson to Orange Street	Small town
Orange Street to I-94 bridge	River town
I-94 bridge to south end of Hudson	Small town
South end of Hudson to north end of Kinnickinnic State Park	Rural residential
Kinnickinnic State Park	Natural
South end of Kinnickinnic State Park to north end of Prescott	Rural residential
North end of Prescott to Mississippi River	River town

In areas outside municipalities limited new developments could be allowed in rural residential, park, and natural management areas, but they could not be visible from the river (unlike alternative A). Specifically, limited new residential and commercial development could occur in rural residential management areas, limited residential development could occur in natural management areas, and recreational facilities could be built in the park and natural management areas. State land use regulations would be strengthened to ensure that the potential visual impacts of new developments in rural areas are minimized.

VEGETATIVE MANAGEMENT

Vegetation management in alternative B would be the same as alternative A. The overall emphasis in this alternative would be on screening structures from view as seen from the river, preventing disturbance of environmentally sensitive areas, and maintaining the existing diversity of plant communities. As in alternative A, a variety of actions would be taken or encouraged to maintain plant communities, but no action would be taken to alter vegetation that would conflict with ensuring that developments were visually screened from the water — vegetative screening of development would take priority over maintenance of native plant communities. State regulations that restrict vegetation removal on private lands would be revised to allow maintenance of the natural diversity and ecological integrity of the riverway's plant communities. The Wisconsin Department of Natural Resources would pursue an amendment to the state land use standards within the riverway (Chapter NR 118), which would allow landowners to write a forest management plan (with department approval) that provided for the maintenance of existing native plant communities and protection of the river's scenic quality. Federal and state scenic easements would be revised on a volunteer basis with individual landowners to maintain native plant communities.

Vegetation on NPS fee lands also would continue to be managed to perpetuate plant communities — actions generally would not be taken to manipulate plant communities or interfere with native insect or disease outbreaks except to protect to life or property, convert existing tree plantations to natural communities, maintain plant community diversity, or maintain habitat for threatened and endangered species.

RIVER CROSSINGS

Under alternative B the managing agencies would continue to encourage safe, compatible, multiple uses of existing corridors and structures that cross the riverway. As in all of the alternatives, all proposed changes to river crossings or corridors would require site-specific environmental evaluations and approval from applicable local and state agencies. The impacts of each proposal would be analyzed and documented before the managing agencies permit any change in a river crossing or corridor.

Minimal changes would be permitted in the number, type, scale, or characteristics of the river crossings — all roads, railroads, utility lines, and submarine lines would be restricted to existing corridors (i.e., the existing rights-of-way or the areas immediately adjacent to the existing rights-of-way). Although road and railroad bridges could be replaced within existing corridors, no change in the scale or character of the bridges would be permitted. (Agencies proposing to replace structures on the National Register of Historic Places or replace structures that are eligible for listing would need to comply with section 106 of the National Historic Preservation Act before they could remove the structures.)

Utility line structures could be replaced, but no changes would be permitted in the number, scale, or character of the transmission structures.

The number of lines in the existing submarine crossings would not be increased, with one exception: utility lines might be relocated to existing submarine crossings. If a utility line was replaced by a submarine line, trenching or directional drilling might be required, depending on the resource impacts.

ISLAND AND PUBLIC SHORELINE MANAGEMENT

North of Stillwater day use would be minimally regulated. For the three state parks in the area camping would be allowed only in designated campgrounds. Camping would be prohibited in three areas administered by the National Park Service:

- from Taylors Falls/St. Croix Falls to 1,200 feet south of Franconia Landing (the upper entrance to Close Slough)
- 1,200 feet north and south of the Highway 243 bridge at Osceola
- from the southern tip of Greenburg Island to the upper entrance to Dead Man's Slough (opposite the city of Marine-on-St. Croix, generally)

Minor restrictions would apply to camping in other areas. However, as use levels continued to grow, additional camping restrictions would be imposed in this alternative to protect riverway resources. Specifically, at some point camping would be restricted north of Stillwater to sites designated by the National Park Service.

Use of the Hudson Islands and publicly owned shorelines generally would be minimally regulated in alternative B, with a couple of exceptions. Camping would continue to be allowed only in designated areas in the two state parks and one regional park in the area. Also, users would be required to have portable toilets to camp on the islands at Hudson.

WATER SURFACE USE

Users on the river would be assured of finding opportunities to engage in a wide range of recreational experiences, ranging from quiet solitude to faster or more social experiences. However, as overall use levels increase, additional use management than exists today would be required in order to minimize the potential for conflicts between incompatible uses while maintaining the diversity of recreational experiences.

The strategy of alternative B would be to permit overall recreational use levels to increase on the lower riverway. However, growth would be limited in some areas and some recreational uses might be separated from other uses in space and/or time south of the north limits of Stillwater to resolve user conflicts or safety concerns.

Specifically, certain parts of the river could be set aside for compatible water uses. For instance, some segments of the river might be designated for canoeing and fishing, while other segments might be set aside for faster recreational uses such as personal watercraft and waterskiing. Other areas might be designated as anchorages. There also could be speed limits and slow no-wake zones at different times and/or days to accommodate more boaters in safe and enjoyable conditions. In all cases, a safe boating channel would be designated for through-traffic along the entire river.

The "Alternative B: Water" map on page 97 and table 11 show the location and distribution of water management areas. The largest portion of the lower riverway in alternative B would be designated as quiet waters (22 miles of the main channel) and natural waters (22 miles of back-waters), followed by active social recreation waters (13.5 river miles) and moderate recreation waters (11.5 river miles). The management area allocation is intended to allow an increase in recreational use (particularly fast motorized uses) between the north limits of Stillwater and Afton, an increase in slower uses below Afton, and limited growth in quiet, largely nonmotorized uses, above Arcola.

Water Use Management From Taylors Falls to Arcola Sandbar

On this stretch of the riverway all of the main channel (22 miles) would be managed as quiet waters, and all of the back-waters would be managed as natural waters. This would help ensure that existing recreational activities did not significantly change. There would be no changes from existing conditions with regard to management of boating on this stretch: Limited increases in use levels would be allowed to continue, existing opportunities for quiet and solitude would be maintained, current speed levels would be maintained, and no changes would occur in access opportunities.

Water Use Management From Arcola Sandbar to the North Limits of Stillwater

The riverway managing agencies would maintain existing recreational opportunities on this stretch. All of the main channel (5 miles) would be a moderate recreation management area, while all of the back-waters would be managed as natural waters. The moderate recreation management designation would provide for moderate numbers of users and a variety of boat types, primarily powerboats, traveling at slower speeds. As boating levels increased, additional speed regulations might be imposed to ensure user safety or reduce conflicts. Access to this stretch would not change.

Table 11: Water Management Area Boundaries in Alternative B

Water Segment	Management Area
The main channel from the Taylors Falls Dam south to the Arcola sandbar	Quiet waters
The backwaters from the Taylors Falls Dam south to the Arcola Sandbar, including Peaslee Lake, the slough between Osceola and Cedar Bend, and from the north end of McLeod Slough to the Arcola sandbar via Dead Man's Slough	Natural waters
The Arcola sandbar to the head of Lake St. Croix	Moderate recreation
The head of Lake St. Croix to Catfish Bar	Active social recreation
Catfish Bar to the Prescott railroad bridge	Moderate recreation

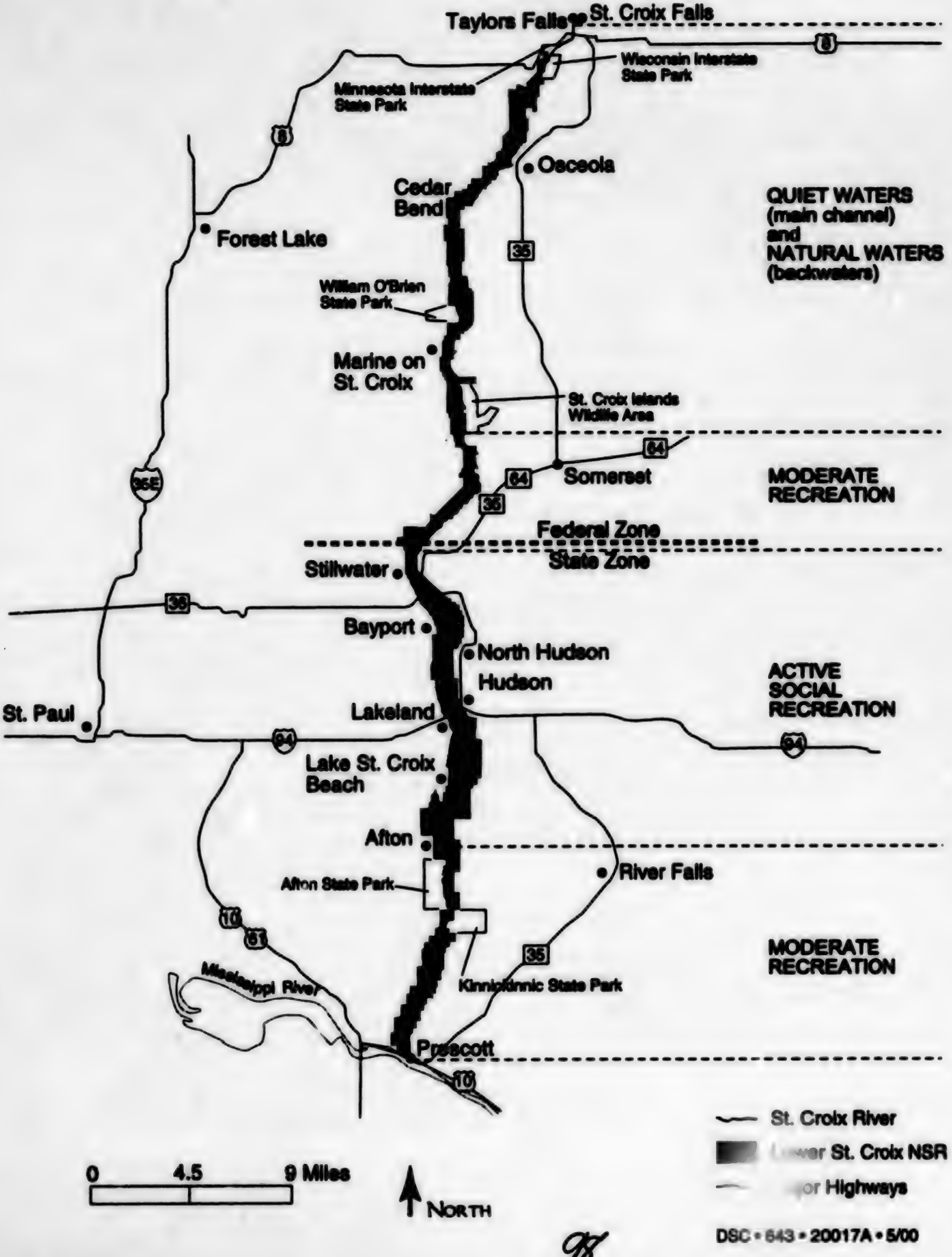
Water Use Management From the North Limits of Stillwater to Prescott

Under alternative B the portion of the riverway between the north limits of Stillwater and Afton would be managed differently from the portion between and Afton and Prescott. The 13.5-mile stretch between the north limits of Stillwater and Afton, accounting for 54% of the overall reach, would be designated as an active social recreation management area. More users would be permitted to use powerboats and pursue a variety of recreational uses (particularly powerboat use) compared to the present, although no changes would be made in existing access points. Speed levels also would be permitted to increase, provided there are no safety concerns.

The 11.5-mile stretch between Afton and Prescott (46% of the overall reach) would be designated as a moderate recreation management area. This management area would provide for a moderate number of people to pursue a variety of uses, primarily powerboat uses. No changes would occur to the existing access points on this stretch. Increased use levels would be permitted, but powerboats would be encouraged to travel at slower speeds. If boating levels continue to increase, the managing agencies might impose additional speed regulations to address conflicts or safety concerns.

Under alternative B the managing agencies would segregate uses either spatially or temporally if user conflicts or safety problems occurred between the north limits of Stillwater and Prescott. For example, the managing agencies would consider permitting only waterskiing in North Hudson Bay. Another example of segregating uses would be permitting sailing only on Saturdays, Sundays, and holidays on the eastern two-thirds of Lake St. Croix, between Interstate 94 and St. Croix Cove, providing that boats moored on the eastern shore travel to and from the western third by the most direct route. A third possible example would be designating anchorage areas, with no-wake speed restrictions, just north of Point Douglas County Park near the Minnesota shore and just south of Kinnickinnic State Park near the Wisconsin shore.

ALTERNATIVE B: WATER
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY



Three of the management actions described in the preferred alternative would also be implemented in alternative B: the navigation channel maintenance, cultural resource management, and land protection/boundary adjustments management actions are identical under both alternatives.

ALTERNATIVE C: MAINTAIN THE LANDSCAPE'S VISUAL QUALITIES AND EXISTING RECREATIONAL CHARACTERISTICS

MANAGEMENT CONCEPT

Alternative C would achieve the same conditions in the riverway as described under alternative B: as much as possible, the views of the lands within the riverway boundary and the diversity of river recreational experiences would be kept the same. The only major difference between the two alternatives would be in the strategy used to maintain the existing diversity of recreational experiences: alternative C would freeze the growth of recreational use.

LAND USE

Like alternative B, lands within the riverway boundary would be managed to maintain the visual quality as seen from the water. The management area allocation in alternative C would be identical to alternative B (see the "Alternative B and C: Land" map on page 91 and tables 9 and 10 on page 92 in the previous section). The majority of lands along the riverway would be designated as rural residential and natural management areas. Limited new residential and commercial development could occur within the municipalities along the riverway, provided it is not visible from the river. In addition, in the river town and small town historic management areas new development could be allowed if it is consistent with the historic character of the communities. New development also could occur in the small town management areas, provided the existing large-lot, single-family character of the areas do not change. To provide local governments with more flexibility, state standards regarding decks and residential additions would be relaxed in the small town management areas, provided the additions were not visible from the water. There are few industrial uses within the riverway; should an industrial site ever be abandoned, the most desirable future use of the riverfront portions of those properties would be public park.

In areas outside municipalities, limited new developments could be allowed in rural residential, park, and natural management areas, but they could not be visible from the river. Specifically, limited new residential and commercial development could occur in rural residential management areas, limited new residential development could occur in natural management areas, and recreational facilities could be built in the park and natural management areas.

VEGETATIVE MANAGEMENT

Vegetative management in alternative C would be the same as described in alternative B. The overall emphasis in this alternative would be on screening structures from view as seen from the river, preventing disturbance of environmentally sensitive areas, and maintaining the diversity of plant communities. A variety of actions would be taken or encouraged on riverway lands to maintain native plant communities, but no action would be taken to alter vegetation that would conflict with ensuring that developments were visually screened from the water — vegetative screening of development would take priority over maintenance of native plant communities. State regulations that restrict vegetation removal on private lands would be revised to allow maintenance of the natural diversity and ecological integrity of the riverway's plant communities. The Wisconsin Department of Natural Resources would pursue an amendment to the state land use standards within the riverway (Chapter NR 118).). Under the proposed amendment, landowners could develop a forest management plan with department approval that would protect the scenic quality of the river, prevent disturbance of environmentally sensitive areas such as steep slopes or riverfront bluffs, and would allow vegetation to be managed in a manner that would maintain significant plant communities. Federal and state scenic easements would be revised on a volunteer basis with individual landowners to maintain plant communities.

Vegetation on National Park Service fee lands also would continue to be managed to perpetuate native plant communities.

RIVER CROSSINGS

Management of river crossings would be the same as described under alternative B. Minimal changes would be permitted in the number, type, scale, or characteristics of the river crossings. Although road and railroad bridges could be replaced within existing corridors, no change in the scale or character of the bridges would be permitted. Existing utility line structures could be replaced with the removal of the existing structure in this alternative, but no changes would be permitted in the number, scale, or character of the transmission structures. No increase in the size or number of lines in the existing submarine crossings would occur with one exception: existing overhead utility lines could be relocated to existing submarine crossings.

ISLAND AND PUBLIC SHORELINE MANAGEMENT

The riverway managing agencies would employ several strategies to prevent a growth in use of publicly owned islands and shorelines and to prevent additional resource impacts along the riverway. As in the other alternatives, north of Stillwater day use would be minimally regulated. For the three state parks in the area camping would be allowed only in designated campgrounds. Camping would continue to be prohibited in the same three areas that were described in alternative B. In alternative C, the National Park Service would implement camping permit and reservation systems: users would need reservations and permits to camp on all NPS administered lands on the lower riverway. North of Stillwater camping would be restricted to sites designated by the National Park Service.

South of Stillwater day use of the Hudson Islands and publicly owned shorelines generally would continue to be minimally regulated. Camping would continue to be allowed only in designated areas in the two state parks and one regional park. Also, users would be required to have portable toilets to camp on the islands at Hudson.

WATER SURFACE USE

Alternative C, like alternative B, would strive to maintain the existing diversity of river recreational experiences and minimize the potential for conflicts between incompatible uses. To achieve this desired condition, recreational use levels would be frozen. In other words, an increase in water surface recreational use over 1997 levels or a change in the mix and pattern of uses would not be permitted. To freeze recreational growth would require more management, monitoring, regulations, and enforcement than presently exist. The alternative would largely rely on tightly regulating all access points to the river (including limiting access to the Mississippi River within boater commuting range of the St. Croix) and banning new access points to prevent future growth. Access points would be closely monitored and closed when their predetermined capacities were reached. Other actions that would be taken to discourage growth include prohibiting new ramps of any kind, prohibiting the expansion or construction of marinas, promulgating more surface use regulations (e.g., designating more slow no-wake zones), and aggressive enforcement of riparian owner access limits.

The "Alternative C: Water" map on page 103 and table 12 show the location and distribution of water management areas. In alternative C the active social recreation management area would cover the largest portion of the lower riverway (25 river miles), followed by natural waters (22 miles) and quiet waters (22 miles); 5 miles of the lower riverway would be designated as a moderate recreation area. The management area distribution above the north limits of Stillwater would be identical to alternative B. However, from the north limits of Stillwater to Prescott, alternative C differs from B in that all of the riverway would be designated as an active social recreation management area, which reflects how this part of the riverway is now managed.

Water Use Management From Taylors Falls to Arcola Sandbar

The main channel (22 miles) from Taylors Falls to Arcola sandbar would be managed as quiet waters, and the backwaters would be managed as natural waters, which would help ensure that recreational activities did not significantly change. Boat management would continue: increases in use levels would be discouraged, opportunities for quiet and solitude and speed levels would be maintained, and access opportunities would remain the same.

Water Use Management From Arcola Sandbar to the North Limits of Stillwater

The riverway managing agencies would maintain existing recreational opportunities on this stretch. The main channel (5 river miles) would be a moderate recreation management area, while the backwaters would be managed as natural waters. The moderate recreation management designation would provide for moderate numbers of users and a variety of boat types, primarily powerboats, traveling at slower speeds. Additional speed regulations might be imposed to ensure user safety or reduce conflicts. No changes in access to this stretch would occur.

Water Use Management From the North Limits of Stillwater to Prescott

This stretch would be designated an active social recreation management area. Users would continue to use powerboats and pursue a variety of recreational uses (particularly powerboat use). Existing use levels and speed levels would be maintained, and access points would remain the same.

ALTERNATIVE C: WATER
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

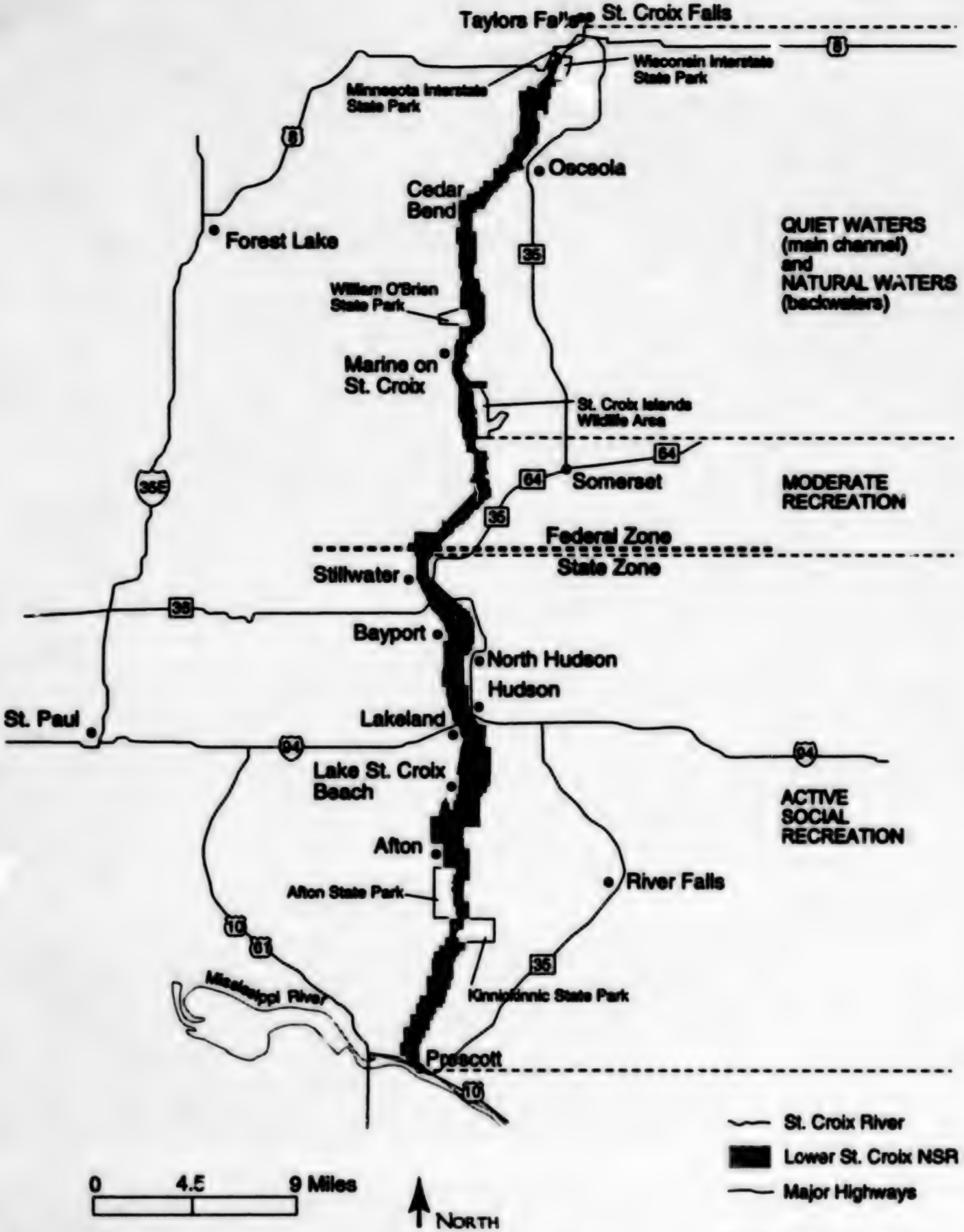


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TABLE 12: WATER MANAGEMENT AREA BOUNDARIES IN ALTERNATIVE C

Area	Classification
Backwaters from the Taylors Falls Dam to the Arcola sandbar	Natural waters
Taylors Falls Dam to the Arcola sandbar	Quiet waters
The Arcola Sandbar to the head of Lake St. Croix	Moderate recreation
The head of Lake St. Croix to Prescott	Active social recreation

Three of the management actions described in the preferred alternative would also be implemented in alternative C: the navigation channel maintenance, cultural resource management, and land protection /boundary adjustments management actions are identical under both alternatives

ALTERNATIVE D: EMPHASIZE RESOURCE PROTECTION AND REDUCE RECREATIONAL USE

MANAGEMENT CONCEPT

As the region surrounding the St. Croix valley continued to urbanize and grow in population, people would have less opportunity to experience nature, quiet, and solitude. In alternative D the lower riverway would be managed to promote and restore the natural qualities of the riverway. The predominance of natural features over modern developments would increase within the riverway boundary. Natural landscapes would be restored where feasible. More emphasis would be placed on promoting user experiences that are quieter, slower, and less intrusive and disturbing to others.

LAND USE

Alternative D would place more emphasis on resource protection than the previous alternatives. Thus, fewer areas would be available for new residential or commercial development than the other alternatives. As shown on the "Alternative D: Land" map on page 106 and tables 13 and 14, the majority of the land in the riverway would be included in natural (22%) and minimally disturbed (32%) management areas. Rural residential management areas would account for 21% of the land in the boundary and would be scattered throughout the riverway. The remaining lands would be included in small town, park, river town, and small town historic management areas, most of which would cover small areas south of Stillwater's northern boundary.

New development would be built within the municipalities along the riverway, provided it was not visible from the river. Additional state and local restrictions would be placed on new development to minimize the visual impact on the landscape. In the river town and small town historic management areas, new development would only be allowed if it was consistent with the historic character of the communities. In small town management areas new development would be permitted only if it was consistent with the large-lot, single-family character of the areas. Unlike alternatives A and B, there would be no relaxation of standards for such features as decks and residential additions. If industrial uses were to be discontinued, local governments would be encouraged to redevelop the areas as parklands.

In areas outside municipalities a strong emphasis would be on resource protection to increase the predominance of the riverway's natural/rural features over modern development. Limited new developments could be allowed in rural residential, park, and natural management areas, but they could not be visible from the river. Some new residential and commercial development could be built in rural residential management areas, and some recreational facilities could be built in the park and natural management areas. State land use regulations would be strengthened to reduce the potential visual impacts of new developments in areas outside towns. Natural landscapes would be restored where feasible. Throughout the riverway, no new construction or expansion of existing structures would be permitted unless topography (not vegetation) made it impossible to see from the river.

ALTERNATIVE D: LAND
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

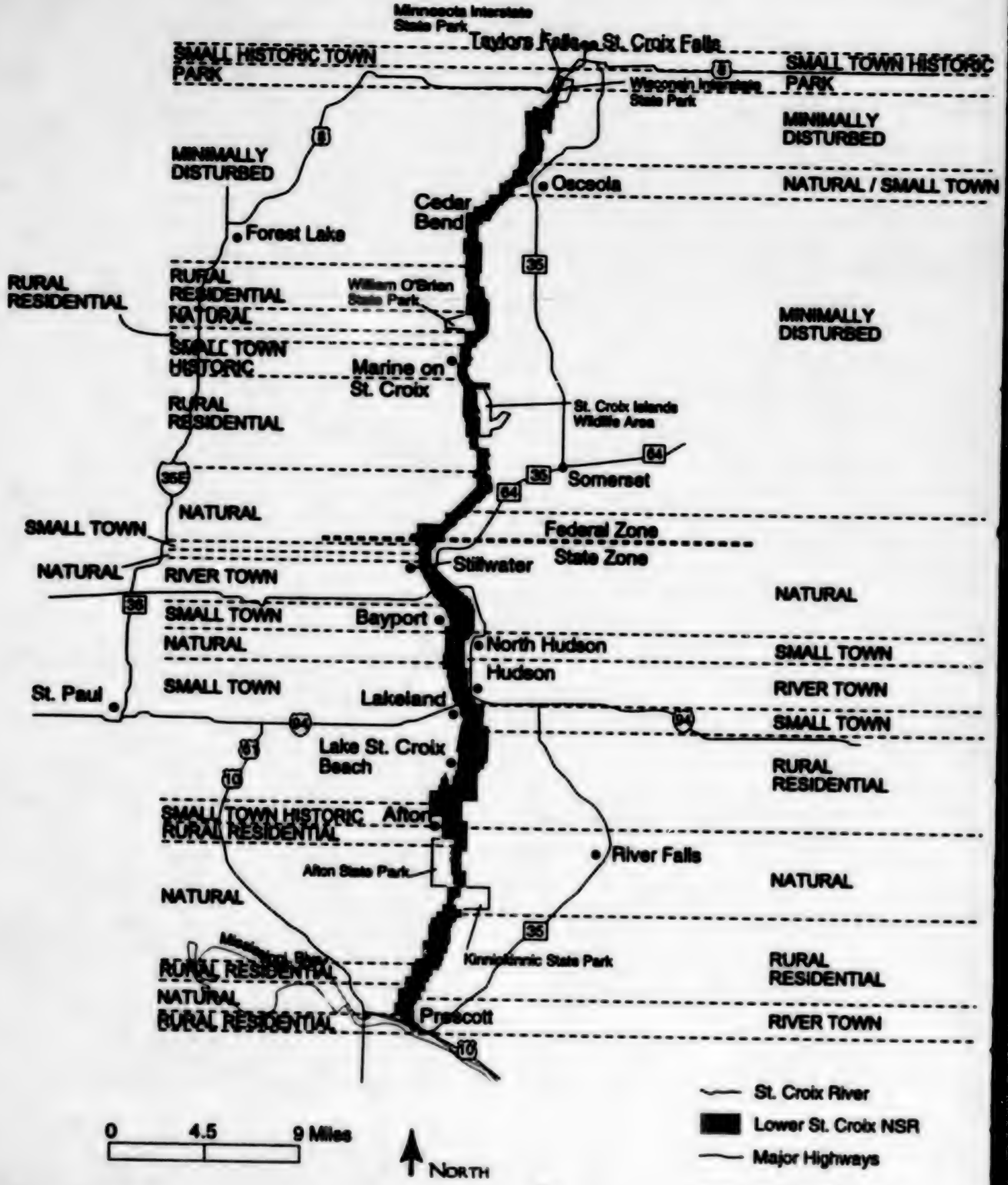

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TABLE 13: LAND MANAGEMENT AREA DISTRIBUTION (%) UNDER ALTERNATIVE D.*

Management Area	Minnesota (%)	Wisconsin (%)	Overall Riverway (%)
River Town	6	4	5
Small Town Historic	6	2	4
Small Town	16	9	12
Rural Residential	23	19	21
Park	4	4	4
Natural	25	20	22
Minimally Disturbed	20	43	32

*Percentages do not necessarily add up to 100% due to rounding.

TABLE 14: LAND MANAGEMENT AREA BOUNDARIES IN ALTERNATIVE D

Land Segment	Management Area
Minnesota	
Taylors Falls	Small town historic
Interstate Park	Park
South end of Interstate Park to south end of McLeod's Slough	Minimally disturbed
South end of McLeod's Slough to north end of William O'Brien State Park	Rural residential
William O'Brien State Park	Natural
South end of William O'Brien State Park to southern tip of Greenburg Island in Marine-on-St. Croix	Rural residential
Southern tip of Greenburg Island in Marine-on-St. Croix to southern boundary of Marine-on-St. Croix's Butternut Falls Addition	Small town historic
Southern boundary of Marine-on-St. Croix's Butternut Falls Addition to High Bridge	Rural residential
High Bridge to north limits of Stillwater	Natural
North limits of Stillwater to south end of Dutch Town	Small town
South end of Dutch Town to train station	Natural
Train station to north limits of Bayport	River town
Bayport	Small town
South limits of Bayport to Hudson railroad bridge	Natural
Hudson railroad bridge to north end of old Afton Village	Small town

Land Segment	**Management Area**
Old Afton Village	Small town historic
South end of old Afton Village (north end of River Road) to north end of Afton State Park	Rural residential
North end of Afton State Park to south end of St. Croix Bluffs Regional Park	Natural
South end of St. Croix Bluffs Regional Park to north end of Carpenter Nature Center	Rural residential
Carpenter Nature Center	Natural
South end of Carpenter Nature Center to Mississippi River	Rural residential
Wisconsin	
St. Croix Falls	Small town historic
Interstate Park	Park
South end of Interstate Park to Twin Springs subdivision, excluding Osceola	Minimally disturbed
Bluffs within Osceola	Natural
Osceola	Small town
Twin Springs subdivision to south edge of St. Croix Station subdivision in North Hudson	Natural
South edge of St. Croix Station subdivision in North Hudson to Orange Street	Small town
Orange Street to I-94 bridge	River town
I-94 bridge to south end of Hudson	Small town
South end of Hudson to Black Bass Bar	Rural residential
Black Bass Bar to south end of Kinnickinnic State Park	Natural
South end of Kinnickinnic State Park to north end of Prescott	Rural residential
North end of Prescott to Mississippi River	River town

VEGETATIVE MANAGEMENT

The primary goals for vegetative management would be to screen structures from view as seen from the river and prevent disturbance of environmentally sensitive areas such as steep slopes or riverfront bluffs.

A secondary goal would be to encourage and promote vegetative management actions that would maintain and restore historically and ecologically significant plant communities and enhance diversity. Successional climax forest and presettlement disturbed oak savanna would be the preferred forest ecotype examples of significant plant communities. However, throughout the lower riverway, vegetative screening of existing structures and potential development sites would take priority over restoration and maintenance of significant plant communities.

This alternative would place emphasis on voluntary actions, coupled with education and stewardship, to preserve and restore plant communities. Removal of exotic species would be encouraged on all lands within the riverway. Control of insects and disease would be recommended if there would be a high likelihood that outbreak would threaten large areas of vegetative cover within the lower riverway or threaten to infest adjacent lands. In addition, pruning or removal of hazard trees would continue to be allowed. Hazard trees would be trees that exhibit damage resulting from insect, disease, age, or storm, and, if they were to fall, would be a safety risk to people or property. Pruning of normal tree growth to prevent property damage would also be allowed.

On local government lands voluntary efforts would be encouraged to maintain and restore preferred forest cover. On state and federal lands the managing agencies would maintain and restore preferred forest types. Vegetation on NPS fee lands would continue to be managed in accordance with NPS policies to perpetuate native plant communities. Plant succession would generally not be interfered with except to protect life or property, convert existing tree plantations to nonmonocultures or mixed species communities, maintain native plant community diversity (e.g., prevent loss of prairie and oak savanna), and maintain habitat for threatened and endangered species. Manipulation of plant communities to maintain threatened and endangered species habitat would be carried out in a manner designed to restore or enhance the functioning of the plant and animal community of which the endangered species is a natural part.

On private lands voluntary efforts would also be encouraged to maintain and restore preferred forest cover so long as these efforts do not conflict with maintaining visual screening of existing structures and potential development sites. State regulations that restrict vegetation management on private lands would be revised to allow maintenance and restoration of the natural diversity and ecological integrity of significant plant communities. A variety of management techniques, such as planting, seeding, pruning, thinning, harvesting, prescribed burning, and clearing, would be allowed and encouraged on private lands in both states to accomplish this goal. Federal and state scenic easements would be revised on a volunteer basis with individual landowners to allow these management techniques.

A specific action that would be taken to encourage significant plant communities concerns lands enrolled under forest tax law programs on the Wisconsin side of the riverway. (Minnesota does not have an equivalent law regarding forest management but this action.) The Wisconsin Department of Natural Resources would pursue an amendment to the state land use standards within the riverway (Chapter NR 118). Under the proposed amendment, landowners could develop a forest management plan with department approval that would protect the scenic quality of the river, prevent disturbance of environmentally sensitive areas such as steep slopes or riverfront bluffs, and would allow vegetation to be managed in a manner that would maintain significant plant communities.

RIVER CROSSINGS

As in the other alternatives, the managing agencies would continue to encourage safe, compatible, multiple uses of existing corridors and structures that cross the riverway. Similarly, all proposed changes to river crossings or corridors would require site-specific environmental evaluations and approval of applicable local and state agencies. The impacts of each proposal would be analyzed and documented before the managing agencies permitted any change in a river crossing or corridor.

In alternative D the managing agencies would strive to reduce the visual impact of structures that cross the riverway. Road, railroad bridges, utility lines, and submarine lines would be restricted to corridors (i.e., the rights-of-way or the areas immediately adjacent to the rights-of-way). Although road and railroad bridges could be replaced within corridors, no change in the scale or character of the bridges would be permitted. (Agencies proposing to replace structures on the National Register of Historic Places or replace structures that are eligible for listing would need to comply with section 106 of the National Historic Preservation Act before they could remove the structures.)

The managing agencies would also encourage a reduction in utility lines. The utility lines could be reduced by consolidating them onto existing bridges and towers, by consolidating them onto new structures in existing corridors (assuming this would eliminate several existing structures), or by converting them to submarine lines.

As noted above, new corridors for submarine lines under the river would not be permitted. However, an increase in the size or number of lines in a submarine corridor might be permitted if this action would result in the replacement of a utility line. If a utility line is replaced by a submarine line, trenching or directional drilling might be required, depending on the resource impacts.

ISLAND AND PUBLIC SHORELINE MANAGEMENT

In alternative D the riverway managing agencies would employ several strategies to prevent additional resource impacts to publicly owned islands and shorelines along the riverway. As in the other alternatives, north of Stillwater day use would be minimally regulated. For the three state parks in the area, camping would be allowed only in designated campgrounds. Camping would continue to be prohibited in the same three areas as described in alternatives B and C. The National Park Service also would limit camping to a few designated sites. Users would need reservations and permits to camp at these sites.

South of Stillwater day use of the Hudson Islands and publicly owned shorelines would continue to be minimally regulated. Camping would continue to be allowed only in designated areas in the two state parks and one regional park in the area. Camping on the islands at Hudson would be limited to just a few watercraft. In addition, users would be required to have portable toilets to camp on the islands.

WATER SURFACE USE

Recreational uses would not change. River users would continue to find opportunities for a variety of recreational experiences. However, more opportunities would be available for users to find quieter, slower, peaceful recreational experiences in designated areas than currently exist. This alternative would encourage users to slow down and appreciate the river's stories and the natural and historical qualities that make the riverway a special place. In other words, alternative D calls for increased use management in order to increase opportunities for quiet and solitude, to address potential user conflicts, and to increase users' appreciation of the riverway.

Increased management of use would occur under this alternative to reduce overall use levels and the density of recreational use on the river and to reduce speed levels. North of the head of Lake St. Croix, use levels and densities would be reduced to provide more opportunities for solitude. South of the head of Lake St. Croix, use levels would be decreased to improve users' experiences by reducing congestion, noise, and conflicts. Lower speeds would be encouraged to help increase users' appreciation of the environment and to reduce conflicts.

Reducing overall use levels would be accomplished by closing some of the existing publicly owned water access points and by acquiring and closing some of the existing privately owned marinas. New access development would be prohibited. Remaining accesses would be closely monitored and closed when their predetermined capacities were reached (including limiting access to the Mississippi River within boater commuter range of the St. Croix). There would also be aggressive enforcement of riparian owner access limits.

The "Alternative D: Water" map on page 113 and table 15 show the location and distribution of water management areas.

The largest portion of the lower riverway would be designated as a moderate recreation management area (25 miles), and as natural waters (22 miles of backwaters and 10 miles of the main channel). Quiet water management areas would cover 17 miles (12 miles of the main channel and 5 miles of backwaters). No active social recreation management areas would be designated, eliminating all fast boating and waterskiing.

Water Use Management From Taylors Falls to Arcola Sandbar

On this stretch of the riverway 12 miles of the main channel would be managed as quiet waters (55% of the entire reach) and 10 miles would be managed as natural waters (45% of the reach). Backwaters (22 miles) would be managed as natural waters. This allocation of management areas would help ensure that recreational activities did not significantly change. To increase opportunities for quiet and solitude, use levels would be decreased and access opportunities would be reduced.

Water Use Management From Arcola Sandbar to the North Limits of Stillwater

All of the main channel and backwaters between Arcola and the north limits of Stillwater (5 river miles) would be a quiet waters management area. Both motorized and nonmotorized boats would continue to be able to use this area. However, alternative D would provide for increased opportunities for quieter, slower boating activities than now. To achieve this, use and speed levels would be reduced. No changes in access points would be permitted.

Water Use Management From the North Limits of Stillwater to Prescott

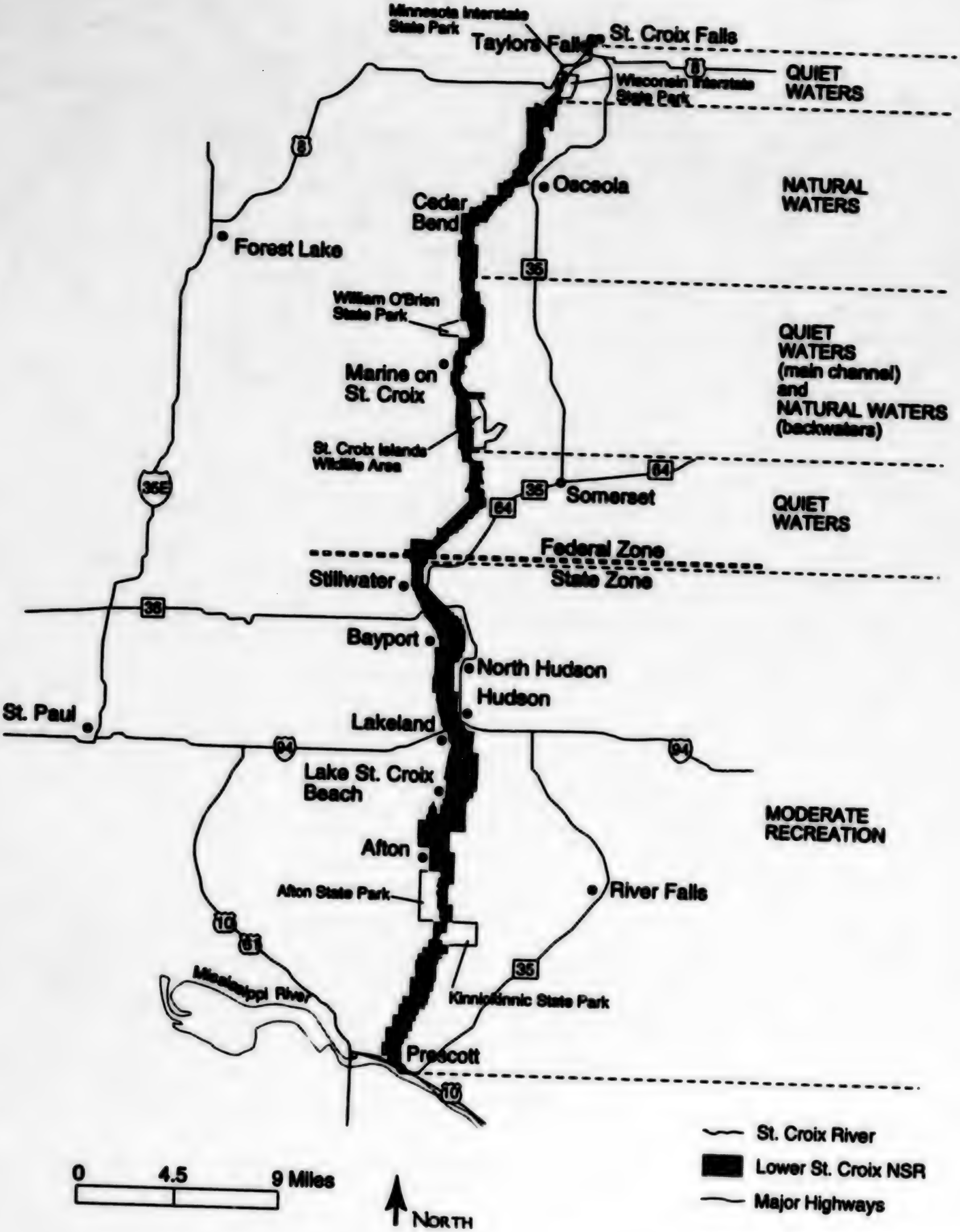
All of this stretch (25 river miles) would be designated as a moderate recreation management area. This management area would provide for a moderate number of people to pursue a variety of uses, primarily powerboat uses. However, to improve the user experience and resolve conflicts, management actions would be taken to decrease use levels, reduce speed levels, and decrease existing access opportunities.

TABLE 15: WATER MANAGEMENT AREA BOUNDARIES IN ALTERNATIVE D

Area	Classification
Taylors Falls Dam south to Rock Island	Quiet waters
The main channel and backwaters from Rock Island to the south end of McLeod Slough	Natural waters
The main channel from the south end of McLeod Slough to the Arcola sandbar	Quiet waters
The backwaters from the south end of McLeod Slough to the Arcola sandbar	Natural waters
The Arcola sandbar to the north limits of Stillwater	Quiet waters
The north limits of Stillwater to the Mississippi River	Moderate recreation

Three of the management actions described in the preferred alternative would also be implemented in alternative D: the navigation channel maintenance, cultural resource management, and land protection /boundary adjustments management actions are identical under both alternatives.

ALTERNATIVE D: WATER
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY



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ALTERNATIVE E: NO ACTION

MANAGEMENT CONCEPT

This alternative is included to satisfy the requirements of the National Environmental Policy Act, and it provides a baseline for comparing the other alternatives. In alternative E the managing agencies would continue to manage the lower riverway as they have in the past. The agencies would continue to follow the guidance and management directions in the 1976 *Master Plan* (with some changes based on current management practices) and the current Lower St. Croix Management Commission's policy resolution. Management would focus on maintaining existing land use and recreational use patterns — no changes would occur in the permitted uses of the lower riverway, and no new management actions would be taken to limit or restrict existing uses unless there were safety concerns or users were adversely affecting the lower riverway's exceptional resources. The managing agencies would react to recreational use as they have in the past and to issues and trends that were not addressed in the *Master Plan*. Riverway management would continue to rely on the policy resolution and potential amendments to address new issues that arose.

LAND USE

The managing agencies would continue to manage land use along the lower riverway as they have in the past. Emphasis would continue to be placed on maintaining long stretches of the lower riverway's natural and rural landscape. The makeup of incorporated areas in Minnesota and Wisconsin is 32% and 16% respectively; the unincorporated areas make up 68% and 84% respectively. Under this alternative 24% of the land along the lower riverway would be maintained as incorporated areas and 76% would be maintained as unincorporated areas. In incorporated areas local and state zoning standards would continue to determine what uses would be permitted. New residential and commercial development could be built in communities as long as the development met state and local standards designed to limit visual impacts. Tight controls would continue on certain development characteristics, such as development density and height and color of structures. Lot sizes would not be restricted, but limits on decks and additions to existing residences would continue. No special actions would be taken to maintain the historic character of riverway communities.

In areas outside municipalities no changes would be made to state land use regulations. Limited new development would continue to be allowed, some of which may be visible from the river.

VEGETATIVE MANAGEMENT

This alternative would emphasize minimizing the visibility of development from the river. Maintenance of the natural abundance, diversity, and ecological integrity of the riverway's plant communities would continue to be limited by state regulations that restrict vegetation removal on private lands. Plant communities would not be afforded any special protection under alternative E — limited management actions would be taken to restore or maintain historically and ecologically significant plant communities, such as prairie and oak savanna on private lands. A vegetation control zone would continue to be in effect along the lower riverway. In this area, which is larger in unincorporated areas than in incorporated areas, large trees generally could not be cut. (However, small trees and shrubs can be removed from this area.)

Vegetative management by private landowners in both states would continue to be limited to the removal of disease or insect infested trees, removal of hazardous trees, pruning of trees, and cutting of understory vegetation. Plant succession and restrictions on vegetation removal would continue to favor perpetuation and expansion of closed canopy forest communities.

One action that could be taken to protect the scenic quality of the river would concern lands enrolled under the managed forest law on the Wisconsin side of the riverway. Current state land use standards (Chapter NR 118) do not provide for the removal of vegetation in the riverway to protect scenic quality. The Wisconsin Department of Natural Resources has proposed that this oversight be corrected. Thus, under alternative E the Wisconsin Department of Natural Resources would pursue an amendment to the state land use standards within the riverway. Specifically, under the proposed amendment, landowners could develop a forest management plan, with department approval, that would allow vegetation to be removed in a manner that would protect the scenic quality of the river.

Vegetation on NPS fee lands would continue to be managed in accordance with NPS policies to perpetuate native plant communities. Plant succession and native insect or disease outbreaks would generally not be interfered with except to protect life or property, convert existing tree plantations to nonmonocultures or mixed species communities, maintain native plant community diversity (e.g., prevent loss of prairie and oak savanna), and maintain habitat for threatened and endangered species. Maintenance of native plant communities would be pursued where it did not conflict with maintaining visual screening for development. Manipulation of plant communities to maintain threatened and endangered species habitat would be carried out in a manner designed to restore or enhance the functioning of the plant and animal community of which the endangered species is a natural part.

RIVER CROSSINGS

In this alternative there would be no changes in the number and type of river crossings. No increases in road and railroad bridges, transmission lines, and submarine corridors, would be permitted. Although road and railroad bridges would be restricted to existing corridors (i.e., the existing rights-of-way or the areas immediately adjacent to the existing rights-of-way), the scale and character of these bridges could be changed. For example, bridges could be widened to allow increased capacity with more lanes. Utility lines might be replaced or relocated, but no change in the number, scale, or character of overhead river crossings would be permitted. Although no new submarine corridors would be permitted, the size and number of lines within existing corridors could be increased. Trenching or directional drilling could be required to install new submarine lines, depending on the resource impacts.

ISLAND AND PUBLIC SHORELINE MANAGEMENT

North of Stillwater, recreational use of publicly owned islands and shoreline areas would continue. Three state parks in this area would allow camping only in designated campgrounds. The National Park Service would continue to prohibit camping in three areas under its management:

- Camping would be prohibited on federal land from Taylors Falls / St. Croix Falls to 1,200 feet south of Franconia Landing (the upper entrance to Close Slough)
- Camping would be prohibited on federal land for 1,200 feet north and south of the Highway 243 bridge at Osceola
- Camping would be prohibited on federal land from the southern tip of Greenburg Island to the upper entrance to Dead Man's Slough (opposite the city of Marine-on-St. Croix, generally)

Camping would be allowed in other areas under NPS jurisdiction, subject to a 7-night limit at any one site and a 30-night limit for the entire summer season at all sites. Camping equipment could not be left unattended for more than 24 hours at any site.

South of Stillwater use of the Hudson Islands and day use of publicly owned shoreline areas would continue to be minimally regulated. Camping in the two state parks and one regional park in the area would continue to be allowed only in designated areas.

WATER SURFACE USE

Under alternative E river users would continue to find opportunities for a variety of recreational experiences. No new management areas would be implemented and no changes would occur in the permitted uses of or access to the lower riverway. No new management actions would be taken to limit or restrict the type of existing uses or user numbers, unless there were safety issues or users were adversely affecting the lower riverway's exceptional resources. The overall number of access points would not change.

New user facilities would not be built, with the exception of developments already planned (e.g., developing the Minnesota Department of Natural Resources public access at the Allen S. King plant). Other existing user facilities, including campsites, trails, and interpretive facilities, also generally would not change. The emphasis would be on maintaining existing facilities.

Water Use Management From Taylors Falls to Arcola Sanbar

The managing agencies would maintain existing opportunities for quiet and solitude on this stretch of the lower riverway. This condition might require the agencies to limit growth in user numbers here. No changes would be made to boat speed limits or to the number of access points along this stretch.

Water Use Management From Arcola Sandbar to the North Limits of Stillwater

Existing opportunities for recreational uses, primarily powerboat recreation, would be maintained as they are now on this stretch. If boating levels increased additional speed regulations might be imposed to ensure user safety.

Water Use Management From the North Limits of Stillwater to Prescott

Existing opportunities would be maintained for large numbers of people to recreate on this stretch, primarily powerboat users. If boating levels increased additional speed regulations might be imposed to ensure user safety. Except for the planned access at the Allen S. King plan, no changes would occur in access opportunities to this stretch.

USER CARRYING CAPACITY

No new special actions would be taken under this alternative to address the lower riverway's carrying capacity. Use would be allowed to continue to increase in the lower riverway unless one of the conditions noted above were met. The existing Lower St. Croix Management Commission policy that prohibits new marinas and expansion of existing marinas in the lower riverway would continue. The existing policy also would continue that limits new public access sites to no more than 100 car/trailer units, provided they met the needs of small watercraft and were located in noncongested use areas. In addition, the current prohibitions on expanding the parking capacity of nonpublic launch ramps and on new nonpublic launching ramps would continue.

NAVIGATION CHANNEL MAINTENANCE

No changes would be proposed for the 3-foot navigation channel between the Taylors Falls dam and the Arcola sandbar or the 9-foot navigation channel from Stillwater to Prescott in alternative E. The 3-foot channel from the Arcola sandbar down to river mile 24.5 at Stillwater would continue to be authorized for navigation and could be maintained if the U.S. Army Corps of Engineers decided it was necessary. The 9-foot navigation channel from Stillwater to Prescott would continue to be maintained at its current width by the Corps. Dredged material would continue to be placed where it could be reused for beneficial purposes while minimizing impacts to aquatic resources. Any watercraft entering the riverway to conduct dredging activities would be checked and cleaned if necessary in a manner consistent with the zebra mussel prevention plan.

CULTURAL RESOURCE MANAGEMENT

The managing agencies would continue to exercise their responsibility to inventory and evaluate historic buildings, structures, landscapes, and archeological, ethnographic, and cultural sites in zones administered by them. In the federally administered zone, the National Park Service would continue to conduct archeological surveys in conjunction with projects involving ground disturbing activities, update the List of Classified Structures inventory for federally owned properties, and complete a cultural landscape inventory. In addition, the National Park Service would prepare a historic resource study and an ethnographic overview and assessment, which would provide contexts and baseline information for resources in the federal and state administered zones of the lower riverway. This information would assist planners and resource managers in understanding the lower riverway's cultural resources, determining appropriate treatments, and establishing priorities for implementing treatments.

NPS planners and resource specialists would work closely with the state historic preservation offices of Minnesota and Wisconsin, American Indian interests, and private property owners where appropriate in developing protection and treatment strategies and priorities for all historic properties along the riverway.

LAND PROTECTION /BOUNDARY ADJUSTMENTS

Land protection within the federally administered zone (north of Stillwater) would continue to be guided by the National Park Service's *Land Protection Plan* (NPS 1984), which identifies those lands or interests in lands that need to be acquired to accomplish the intent of the Wild and Scenic Rivers Act and/or riverway management objectives. In large part, fee title acquisition and scenic easement acquisition have been completed in the federally administered zone; therefore, there would be no major changes in the status of lands from Taylors Falls to Stillwater.

Land protection throughout the lower riverway would continue to rely on special riverway zoning regulations, which have been adopted and administered by local governments based on standards established by the states. The states would continue to provide oversight on local decisions to ensure consistent administration of the rules. State land use rules could be amended under this alternative for several reasons, such as to make the Minnesota and Wisconsin rules more alike, to make the rules consistent with new policy resolutions of the Lower St. Croix Management Commission, and to reflect any changes in eligibility for the Wisconsin forest management tax program.

Some limited protection in the state-administered zone (south of Stillwater) would continue to be provided by scenic easements acquired by the states. No new scenic easements would be acquired by the states. However, the states would continue to administer their current easements.

Minor boundary adjustments would continue to be evaluated on a case-by-case basis. Some minor adjustments would continue to be considered by the managing agencies, such as where the boundary now splits a parcel of land, or where an adjacent road provides a more easily definable boundary.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

The task force identified two other alternatives for managing the Lower St. Croix but dropped them from further study. Under the "Lake Minnetonka" concept the intent would have been to allow portions of the lower riverway to change so they would have looked like Lake Minnetonka, a lake in suburban Minneapolis surrounded by beautifully landscaped homes, which users could view from their boats. State land use controls would have been limited under this alternative; there would have been no state restrictions unique to the Lower St. Croix. Unrestricted residential development would have been allowed along parts of the shoreline, enabling river users to float past a "parade of scenic homes." The task force rejected this alternative because it would have been inconsistent with the purposes of the lower riverway. This alternative would have allowed increased urbanization in the riverway corridor, which would have resulted in the loss of many of the outstanding natural scenic qualities. The lower riverway was established by Congress to protect and preserve the scenic resources and to maintain the area's natural character in an urbanizing region. Houses would not have been considered "scenic resources" in the context of a river in the national wild and scenic rivers system.

The other alternative that was dropped from consideration emphasized resource protection and slower, nonmotorized uses on the lower riverway. (Alternative E in the April 1997 workbook.) Increased emphasis would be placed on restoring natural landscapes compared to the other alternatives. More restrictions would be placed on new developments to reduce their visibility from the water. Natural quiet would be encouraged through controls on the use of machinery on lands within the boundary. This alternative also would ban all motorized watercraft and would allow increased nonmotorized use north of the Boomsite. South of the Boomsite motorized watercraft would be permitted, but these boats could operate only at slow speeds except in two designated waterskiing areas: Hudson's north bay and north of the Kinnickinnic Narrows. Additional anchorage areas would be put in the lower part of the river. The task force dropped this alternative because it would be inconsistent with the principles underlying the alternatives. Specifically, the ban on motorized watercraft north of the Boomsite and restriction on motorboats south of the Boomsite would profoundly change the nature of water-based recreation on the Lower St. Croix. This management action would directly contradict the lower riverway's purposes, which state that the riverway "accommodate a diverse range of recreational opportunities." It is inconsistent with the riverway's exceptional resources and values, which state: "The exceptional characteristics of the linear riverway provide for a wide range of high-quality recreational experiences. People could easily find opportunities, ranging from peace and solitude to dynamic social interaction." It is also inconsistent with the task force's vision statement, which includes "a diversity of recreational and living experiences, ranging from quiet solitude to highly social, motorized uses."

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Management Structure Options

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INTRODUCTION

The current management structure for the Lower St. Croix has been in place for over 20 years. By law, the lower riverway must be jointly managed by the Minnesota and Wisconsin Departments of Natural Resources and the National Park Service. The vehicle for that joint management has been the Lower St. Croix Management Commission, established in 1973 by cooperative agreement. In addition to the three voting members, the Minnesota-Wisconsin Boundary Area Commission serves as a nonvoting member.

One of the questions dealt with in the planning process was how the federal, state, and local agencies should work together to administer the lower riverway — who should be involved in management, what roles and responsibilities should each agency have, and what would be the best governmental organization for managing the lower riverway? Five distinct options were developed for the lower riverway management structure. Each option includes directions for which agency should participate in activities, who should do policy development, how land and water surface use should be managed, and anticipated implementation costs.

Although several of the options shift some authorities and responsibilities among the agencies, a "given" for all of the options would be as follows: by law primary management responsibility for the lower riverway would rest with the two state departments of natural resources and the National Park Service; the Minnesota-Wisconsin Boundary Area Commission would continue to have public interest responsibilities as outlined in state laws; the states would review and comment on local zoning actions; all three agencies would participate in and provide staff for on-water law enforcement, rescue, and related activities; the National Park Service would provide staff for management of lands it owns north of Stillwater.

A summary of the options and their impacts can be found in tables 20 and 22 at the end of this chapter.

PREFERRED OPTION

The preferred management structure being proposed for administering the Lower St. Croix National Scenic Riverway would require more partnerships than now but would not require additional federal and state legislation, would not create new organizations, and would not require extensive new funding.

POLICY DEVELOPMENT

The Lower St. Croix Management Commission (hereafter referred to as the management commission) would continue to be the primary policy body for the riverway — it would be responsible for policy development, including preparation and adoption of policy documents as needed and management plan updates every 20 years. The management commission also could review and comment on all actions by government and others that affect the lower riverway.

The organization of the management commission would be similar to what it is today. The Minnesota Department of Natural Resources, Wisconsin Department of Natural Resources, and the National Park Service would continue to be the three voting members. Two nonvoting members also would serve on the management commission: one member of the Minnesota-Wisconsin Boundary Area Commission, appointed by that commission, and one member of the Lower St. Croix Partnership Team (a new organization described below), appointed by that team. In addition, a technical committee, consisting of field-level staff, would continue to address day-today issues. The Minnesota-Wisconsin Boundary Area Commission would continue to provide staff services to the management commission and its technical committee and would provide coordination for water surface law enforcement.

A new organization, called the Lower St. Croix Partnership Team, would be established to serve as an advisor to the management commission. The team would have the following duties: serve as an advisor for development and revision of state water surface use regulations (see appendix B); serve as an advisor for development and revision of state land use regulations (see appendix A); conduct on a bimonthly basis post-decision review of local land use actions (variances, etc.) for consistency with intent; and appoint one nonvoting member to the Lower St. Croix Management Commission. The membership of the partnership team would be based on the Lower St. Croix Planning Task Force, but its membership would be more clearly defined: the team would consist of representatives of local governments and a balanced list of stakeholder groups. Staff services to the partnership team would be provided by the two state departments of natural resources.

LAND USE MANAGEMENT

Under the preferred option the two state departments of natural resources would adopt state rules that form the basis for local riverway ordinances. The Lower St. Croix Partnership Team would serve as a public forum for development of the state rules. Local governments would be required to adopt and enforce ordinances based on the states' rules (local ordinances could be more restrictive than state rules, but not less so); the departments of natural resources would have review or certification authority over local ordinances and any amendments to those ordinances. The departments of natural resources also would provide regular training for local government officials on land use management questions.

In implementing the ordinances, local governments would provide notice of hearings to the managing agencies. To provide for cross-agency consultation, the management commission's technical committee would review all applications for variances and conditional use permits. Both the technical committee and the departments of natural resources could comment on applications either in writing or at the local government hearings.

However, no riverway managing agency would have veto authority over a local government decision on a conditional use permit or subdivision. If disagreements occurred, appeals could be made to the courts.

The partnership team would meet at least bimonthly and review all local land use decisions rendered during the previous months. It would make periodic reports and/or recommendations to the management commission and state departments of natural resources to improve the consistency of local government implementation of their riverway ordinances.

WATER SURFACE USE MANAGEMENT

On-water law enforcement would continue to be provided by the five county sheriff's departments, the two departments of natural resources, and the National Park Service. Increased coordination among surface water law enforcement agencies would be led by staff to the management commission.

OPTION 1: MINOR ADJUSTMENTS TO THE CURRENT MANAGEMENT STRUCTURE

POLICY DEVELOPMENT

Under option 1 there would be minor adjustments to management roles and responsibilities for the lower riverway, centering on the Lower St. Croix Management Commission and the Lower St. Croix Planning Task Force. The management commission would continue to set overall policies for the lower riverway. However, the management commission would be expanded to include one local government representative and a support staff and office in the valley. As a result, the management commission would serve as a public information source about riverway management rather than the Minnesota-Wisconsin Boundary Area Commission. However, the boundary commission would continue to have public interest review responsibilities as outlined in state laws.

LAND USE MANAGEMENT

Land use management roles and responsibilities would be similar to what they are today in this option. Local governments would continue to be responsible for adopting and enforcing land use regulations within their jurisdictions. They would continue to act on proposals to change the zoning of property, decide if uses should be permitted in some areas only under certain conditions, and decide if variances should be issued from certain zoning provisions. The two state departments of natural resources would continue to ensure that local governments provide consistent, appropriate enforcement of land use regulations. The departments of natural resources also would continue to review and approve or disapprove local decisions. However, the Lower St. Croix Planning Task Force would be restructured and made permanent. The task force would interpret state land use rules and provide mediation services when there were disagreements among landowners, local governments, and the two departments of natural resources.

WATER SURFACE USE MANAGEMENT

On-water law enforcement would continue to be provided by the five counties, two departments of natural resources, and the National Park. The Lower St. Croix Planning Task Force would be restructured and made permanent to improve coordination among the law enforcement agencies.

OPTION 2: SHIFT AUTHORITY FOR LAND USE AND WATER USE REGULATION TO A JOINT POWERS BOARD

POLICY DEVELOPMENT

As in the previous options, the Lower St. Croix Management Commission would continue to set overall policies for the lower riverway. But under this option the management commission would be expanded from its current three members (i.e., the two departments of natural resources and National Park Service) to include one local government representative, one landowner representative, one general public representative, and one Minnesota-Wisconsin Boundary Area Commission representative. The management commission also would have its own support staff and office in the valley and would serve as a public information source on riverway management. The boundary commission would not serve as a public information source, but it would continue to have public interest review responsibilities.

LAND USE MANAGEMENT

In option 2 the local governments would continue to be responsible for implementing land use regulations within the jurisdictions. However, a new entity, called a joint powers board, would be created to oversee land use management. The joint powers board would be created by all the valley's local governments and would include one representative from each of the 15 municipalities and five counties along the riverway. (Authorization of this board may require approval by both state legislatures and Congress.) The board would have the responsibility to ensure that local governments provide consistent, appropriate enforcement of land us regulations. It would review and approve or deny local government decisions in the same way the two departments of natural resources now oversee local decisions — the departments of natural resources would no longer be involved in reviewing local decisions. The board would meet regularly to review local actions, elect officers, have an office and staff, and administer its budget.

In addition to the joint powers board, a citizens review board would be created to serve as an advisor to landowners, local governments, and the joint powers board on the consistency, accuracy, and appropriateness of local land use decisions. The citizens review board would have individuals with technical expertise to review land use decisions.

WATER SURFACE USE MANAGEMENT

A new entity, called the St. Croix water patrol, would perform all water law enforcement on the lower riverway. This water patrol would be created by a joint powers board for water, consisting of the five counties, two departments of natural resources, and the National Park Service. (Authorization of the joint powers board would require the approval of both state legislatures and Congress.) With a single law enforcement agency, there would be no need for coordination noted in the above options.

OPTION 3: SHIFT AUTHORITY FOR LAND USE AND WATER USE REGULATION TO A RIVERWAY BOARD AND JOINT POWERS BOARD

POLICY DEVELOPMENT

This option is identical to option 2 concerning policy development. The Lower St. Croix Management Commission would continue to set overall policies for the lower riverway, but its membership would be expanded to include one local government representative, one landowner representative, one general public representative, and one Minnesota-Wisconsin Boundary Area Commission representative. The management commission also would have its own support staff and its own office in the valley, and would serve as a public information source on riverway management. The boundary commission would continue to exercise its public interest review responsibilities.

LAND USE MANAGEMENT

The only difference between options 2 and 3 would be the method of regulating land use in the lower riverway. In this option a single land-use authority would be created for the valley. Local governments would not handle riverway zoning matters within their borders. Instead, a riverway board, modeled on the Lower Wisconsin State Riverway Board, would be created to directly manage land use within the lower riverway. The board would work directly with landowners in reviewing development proposals. It would have the authority to approve, modify, or reject individual land development proposals in place of local governments. Landowners would need approvals from both local governments and the riverway board to build new developments within the lower riverway. There would be no oversight agency reviewing the board's decisions. The interpretation of land use rules and mediation of disputes would be the board's responsibility.

Since the riverway board would have cross-river authority, it would need to be authorized by both legislatures and Congress. The board would consist of 20 members, with each of the elected governing bodies of the 15 municipalities and five counties appointing one member. The board would meet monthly to act on construction applications. It would have an office, elect officers, administer a budget, and employ a staff.

WATER SURFACE USE MANAGEMENT

Like option 2, a new entity, called the St. Croix Water Patrol, would perform all water law enforcement on the lower riverway. This water patrol would be created by a joint powers board for water, consisting of the five counties, two departments of natural resources, and the National Park Service. (Authorization of the joint powers board would require the approval of both state legislatures and Congress.)

OPTION 4: CONTINUE CURRENT MANAGEMENT STRUCTURE (NO ACTION)

POLICY DEVELOPMENT

Under this option the lower riverway would continue to be managed as it is now. There would be no changes in agency authorities or responsibilities. Overall management policies would continue to be set by the three-member Lower St. Croix Management Commission, consisting of the Minnesota and Wisconsin Departments of Natural Resources and the National Park Service. The Minnesota-Wisconsin Boundary Area Commission would continue to be a nonvoting member of the management commission and would serve as a public information source about riverway management.

LAND USE MANAGEMENT

Option 4 would be similar to option 2 concerning roles and responsibilities for land use management: local governments would be responsible for implementing land use regulations within their jurisdictions, while the two departments of natural resources would continue to provide oversight on local decisions and enforcement of land use regulations.

WATER SURFACE USE MANAGEMENT

Roles and responsibilities for water surface use management would largely remain as they are today. Surface water law enforcement would continue to be provided by the five-county sheriff departments, two departments of natural resources, and the National Park Service. One change would be that the Minnesota-Wisconsin Boundary Area Commission would assume leadership in facilitating coordination among the law enforcement agencies.

IMPLEMENTATION COSTS OF ALTERNATIVES AND OPTIONS

Table 16 provides a summary of the implementation costs under each alternative that would be incurred by the two states, local governments, and the National Park Service. Table 17 provides a summary of costs for implementing the management structure options.

Implementation of any alternative or option would depend on the availability of adequate funding for additional staff or other costs. Approval of the cooperative management plan would not provide any funding, nor would it guarantee that money for implementation of all elements of the plan would be provided. Each major action would compete for funding with other managing agency priorities and projects. The costs primarily represent long-range staffing needs that are expected to take years to implement.

It should also be acknowledged that both states and the National Park Service are currently operating with an annual budget shortfall. That is, the managing agencies are underfunded to meet the continuing demands of increased use, internal program requirements, and outside development pressure. Regardless of the alternative selected, both the states of Minnesota and Wisconsin and the National Park Service would require additional support funding to meet current program requirements. Each partner would continue to seek funding, through its standard budget process, to meet these outstanding program needs.

TABLE 16: IMPLEMENTATION COSTS OF ALTERNATIVES

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
One-time costs					
Minnesota					
Management	$40,000	$20,000	$40,000	$40,000	$40,000
Enforcement	7,500	0	7,500	7,500	7,500
Acquisition	0	0	0	0	12,000,000
MN Total	**$47,500**	**$20,000**	**$47,500**	**$47,500**	**$12,047,500**
Local gov'ts. in Minnesota					
Management	$60,000	$60,000	$60,000	$60,000	$60,000
Enforcement	7,500	0	7,500	7,500	7,500
Total local gov't. in MN	**$67,500**	**$60,000**	**$67,500**	**$67,500**	**$67,500**
Wisconsin					
Management	0	0	0	0	0
Enforcement	$7,500	0	$7,500	$7,500	$7,500
Acquisition	0	0	0	0	$12,000,000
WI Total	**$7,500**	**0**	**$7,500**	**$7,500**	**$12,007,500**
Local gov'ts. In Wisconsin					
Management	$41,500	$40,000	$40,000	$40,000	$40,000
Enforcement	$7,500	0	$7,500	$7,500	$7,500
Total local gov't. In WI	**$49,000**	**$40,000**	**$47,500**	**47,500**	**$47,500**
Annual costs					
Minnesota					
Management	$187,500	$187,500	$187,500	$187,500	$218,750
Enforcement	112,500	0	112,500	225,000	225,000
Research	45,000	45,000	45,000	45,000	45,000
Grants	20,000	20,000	20,000	20,000	20,000
Total MN	**$365,000**	**$252,500**	**$365,000**	**$477,500**	**$508,750**

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Local gov'ts. In Minnesota					
Management	0	0	0	0	0
Enforcement	$56,250	0	$56,250	$112,500	$112,500
Total local gov't. in MN	**$56,250**	**0**	**$56,250**	**$112,500**	**$112,500**
Wisconsin					
Management	$187,500	$187,500	$187,500	$187,500	$218,750
Enforcement	112,500	0	112,500	225,000	225,000
Research	45,000	45,000	45,000	45,000	45,000
Grants	20,000	20,000	20,000	20,000	20,000
Total WI	**$365,000**	**$252,500**	**$365,000**	**$477,500**	**$508,750**
Local gov'ts. In Wisconsin					
Management	$7,500	0	0	0	0
Enforcement	20,000	0	$20,000	$40,000	$40,000
Total local gov't. In WI	**$27,500**	**0**	**$20,000**	**$40,000**	**$40,000**
National Park Service					
Management	$81,000	$81,000	$81,000	$81,000	$81,000
Administration	75,000	75,000	75,000	75,000	75,000
Resource management	172,000	177,000	177,000	177,000	202,000
Resource protection	164,000	164,000	164,000	164,000	189,000
Interpretation/ visitor services	199,000	150,000	125,000	199,000	150,000
Maintenance	117,000	157,000	142,000	157,000	122,000
Research	100,000	100,000	100,000	100,000	100,000
Total NPS	**$908,000**	**$904,000**	**$864,000**	**$953,000**	**$919,000**
Grand Total	**$1,893,250**	**$1,529,000**	**$1,840,250**	**$2,230,500**	**$28,489,500**

TABLE 17: IMPLEMENTATION COSTS OF OPTIONS

	Preferred Option	**Option 1**	**Option 2**	**Option 3**
Riverway coordinator	$75,000[a]	$75,000	$75,000	$75,000
Organizational support	$25,000[b]	$25,000	$25,000	$25,000
Clerical	0	$60,000	$90,000	$90,000
Office operations	0	$50,000	$75,000	$75,000
Law enforcement	0	0	$400,000	$400,000
Boats, vehicles, equipment	0	0	$45,000	$45,000
Annual total	0	$210,000[c]	$710,000[d]	$710,000[e]
One-time start-up costs	0	$50,000[f]	$75,000[g]	$75,000[h]
Total	**$100,000**	**$260,000**	**$785,000**	**$785,000**

a. The coordination costs are already shown for the preferred alternative in table 16.

b. The coordination costs are already shown for the preferred alternative in table 16.

c. The Lower St. Croix Management Commission's costs would be split equally by the National Park Service, Minnesota DNR, and Wisconsin DNR.

d. The Joint Powers Board would receive half its funds from the Minnesota Legislature and half from the Wisconsin Legislature, as would the St. Croix Water Patrol.

e. The Riverway Board would receive half its funds from the Minnesota Legislature and half from the Wisconsin Legislature, as would the St. Croix Water Patrol.

f. The Lower St. Croix Management Commission's costs would be split equally by the National Park Service, Minnesota DNR, and Wisconsin DNR.

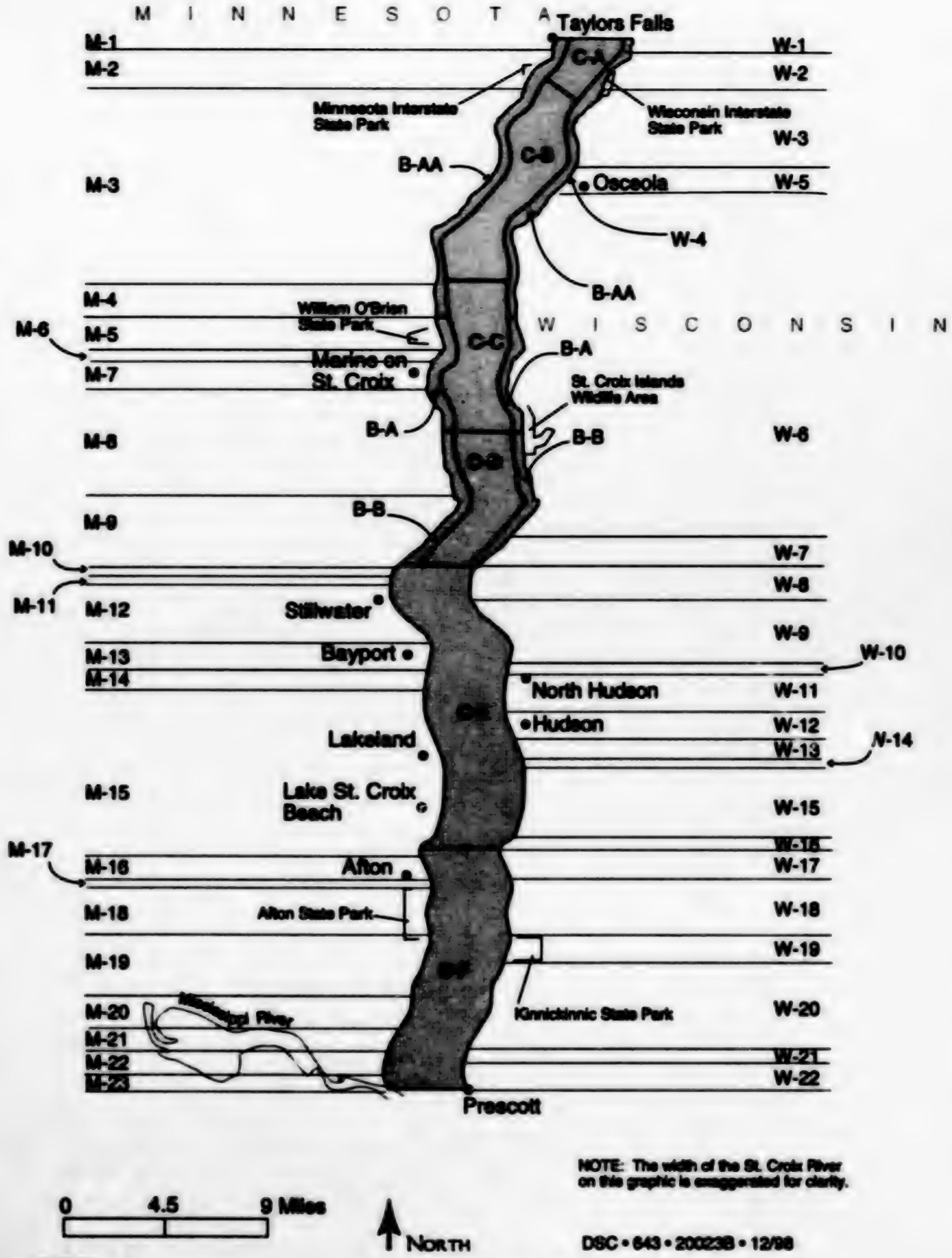
g. The Joint Powers Board would receive half its funds from the Minnesota Legislature and half from the Wisconsin Legislature, as would the St. Croix Water Patrol.

h. The Riverway Board would receive half its funds from the Minnesota Legislature and half from the Wisconsin Legislature, as would the St. Croix Water Patrol

SUMMARY OF ALTERNATIVES AND OPTIONS

The following Land and Water segment map for the Lower St. Croix is keyed to table 18. The keys on the map (i.e., M-1, W-1) correspond to the reaches of the river shown on the table, which provides a summary comparison of land and water use management alternatives for Minnesota and Wisconsin. A summary of the four management structure options are shown in table 19. Impacts of the alternatives are presented in table 20 and impacts of the four options are shown in table 21.

LAND AND WATER SEGMENT KEY
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY



NOTE: The width of the St. Croix River on this graphic is exaggerated for clarity.

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TABLE 18: COMPARISON OF LOWER ST. CROIX NATIONAL SCENIC RIVERWAY ALTERNATIVES (LAND USE MANAGEMENT)

LAND MANAGEMENT CONCEPTS	PREFERRED ALTERNATIVE	ALTERNATIVE A	ALTERNATIVE B/C	[illegible]	[illegible]
Development in communities (including river town, small town historic, and small town)	Maintain long stretches of the lower riverway's natural and rural landacape while still allowing new development in existing communities; overall character of communities would not significantly change; new residential and commercial development could be built as long as it met development standards designed to limit visual impact and was consistent with the historic character of the river communities	Maintain long stretches of the lower riverway's natural and rural landscape; allow limited new residential and commercial development that was consistent with the historic character of the river's communities	Maintain long stretches of the lower riverway's natural and rural landscape; new residential and commercial development could be built as long as it was not visible from the river	Maintain long stretches of the lower riverway's natural and rural landscape; remove existing development that is visible from the river if or when opportunities arose	Maintain long stretches of the lower riverway's natural and rural landscape; new residential and commercial development could be built as long as it met development standards designed to limit visual impact
	Some state land use regulations would be relaxed in river town, small town historic, and small town management areas to give local governments greater flexibility in regulating land use, development density, structure height, etc.	Some state land use regulations would be relaxed in river town, small town historic and small town management areas to give local governments greater flexibility in regulating land use, development density, structure height, etc.; encourage clustering of new development	More restrictions would be placed on new development to minimize visibility from the river	Same as alternative B/C	Regulations in incorporated areas would not be as restrictive as in rural areas, but tight controls on land use (including zoning districts), development density, structure height, etc., would be established
	In the small town management areas, the emphasis would be on retaining the large-lot single-family character of the area, while relaxing standards for features such as decks and residential additions	In the small town management area, the emphasis would be on retaining the large-lot single-family character of the area, while relaxing standards for features such as decks and residential additions	In the small town management area, the emphasis would be on retaining the large-lot single-family character of the area; new development would not be visible from the river	Same as alternative B/C	In incorporated areas, lot size would not be as restricted as in rural areas, but there would be limits on decks and residential additions
	In river town and small town historic management areas, new development would be allowed if it was consistent with the historic character of the communities	In river town and small town historic management areas, new development would be allowed if it was consistent with the historic character of the communities	In river town and small town historic management areas, new development would be allowed if it was consistent with the historic character of the communities and not visible from the river	Same as alternative B/C	No special action would be taken to address the historic character of communities
	If an industrial use was discontinued, the most desirable future use of the riverfront portions of these properties would be public park.	If an industrial use was discontinued, commercial, residential or recreational use of the site would be considered	Same as alternative A	If an industrial use was discontinued, redevelopment of the area as urban parkland would be considered	Uses would be determined by the municipality's underlying zoning standards
Development outside of communities (including rural residential, park, natural, minimally disturbed) ***Note: park, natural, minimally disturbed combined as "Conservation" in Preferred Alternative.***	Limited new developments would be permitted, so long as they were visually inconspicuous as seen from the river; more restrictions would be placed on new developments to reduce their visibility; natural landscapes would be restored where feasible	Limited new development would be allowed, some of which might be visible from the river, so long as the riverway's rural and natural character was maintained	Land uses would be managed to maintain visual characteristics as seen from the water, more restrictions would be placed on new developments to reduce their visibility	There would be a strong emphasis on resource protection, increasing the predominance of natural features over modern development; more restrictions would be placed on new developments to reduce their visibility; natural landscapes would be restored where feasible	Limited new development would continue to be allowed, some of which might be visible from the river

COMPARISON OF LOWER ST. CROIX NATIONAL SCENIC RIVERWAY ALTERNATIVES (Minnesota Land Use Segments)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
M-1 Taylors Falls	Small town historic	Small town historic	Small town historic	Small town historic	Incorporated
M-2 Interstate Park	Conservation	Park	Park	Park	Unincorporated
M-3 South end of Interstate Park to south end of McLeod Slough	Conservation	Natural	Natural	Minimally disturbed	Unincorporated
M-4 South end of McLeod Slough to north boundary of William O'Brien State Park	Rural residential	Rural residential	Rural residential	Rural residential	Unincorporated
M-5 William O'Brien State Park	Conservation	Park	Natural	Natural	Unincorporated
M-6 South end of William O'Brien State Park to southern tip of Greenburg Island in Marine-on-St. Croix	Rural residential	Rural residential	Rural residential	Rural residential	Rural residential
M-7 Southern tip of Greenburg Island in Marine-on-St. Croix to southern boundary of Marine-on-St. Croix's Butternut Falls Addition	Small town historic	Small town historic	Small town historic	Small town historic	Incorporated
M-8 Southern boundary of Marine-on-St. Croix's Butternut Falls Addition to High Bridge	Rural residential	Rural residential	Rural residential	Rural residential	Unincorporated
M-9 High Bridge to north limits of Stillwater	Rural residential	Rural residential	Rural residential	Natural	Unincorporated
M-10 North limits of Stillwater to the south end of Dutch Town	Small town	Small town	Small town	Small town	Incorporated
M-11 South end of Dutch Town to train station	Small town	River town	Small town	Natural	Incorporated
M-12 Train station to north limits of Bayport	River town	River town	River town	River town	Incorporated
M-13 Bayport	Small town	Small town	Small town	Small town	Incorporated
M-14 South limits of Bayport to Hudson railroad bridge	Rural residential	Small town	Rural residential	Natural	Unincorporated
M-15 Hudson railroad bridge to north limits of old Afton Village	Small town	Small town	Small town	Small town	Incorporated
M-16 Old Afton Village	Small town historic	Small town historic	Small town historic	Small town historic	Incorporated
M-17A South limits of old Afton Village to south end of River Road	Small town	Rural residential	Rural residential	Rural residential	Incorporated
M-17B South end of River Road to Afton State Park	Rural residential	Rural residential	Rural residential	Rural residential	Incorporated
M-18 Afton State Park	Conservation	Park	Natural	Natural	Unincorporated
M-19 South end of Afton State Park to north end of St. Croix Bluffs Regional Park	Rural residential	Rural residential	Rural residential	Natural	Unincorporated
M-20 St. Croix Bluffs Regional Park	Park	Park	Park	Natural	Unincorporated
M-21 South end of St. Croix Bluffs Regional Park to Carpenter Nature Center	Rural residential	Rural residential	Rural residential	Rural residential	Unincorporated
M-22 Carpenter Natural Center	Natural	Natural	Natural	Natural	Unincorporated
M-23 South end of Carpenter Natural Center to the Mississippi River	Rural residential	Rural residential	Rural residential	Rural residential	Unincorporated

COMPARISON OF LOWER ST. CROIX NATIONAL SCENIC RIVERWAY ALTERNATIVES (Wisconsin Land Use Segments)

W-1 St. Croix Falls	Small town historic	Small town historic	Small town historic	Small town historic	Incorporated
W-2 Interstate Park	Conservation	Park	Park	Park	Unincorporated
W-3 South end of Interstate Park to limits Osceola	Conservation	Natural	Natural	Minimally disturbed	Unincorporated
W-4 Bluffs within Osceola	Conservation	Small town	Natural	Natural	Incorporated
W-5 Downtown Osceola	Small town historic	Small town historic	Small town	Small town	Incorporated
W-6A South of Osceola to High Bridge	Conservation	Natural	Natural	Minimally disturbed	Unincorporated
W-6B High Bridge to Twin Springs	Rural residential				
W-7 Twin Springs subdivision to Houlton	Rural residential	Rural residential	Rural residential	Natural	Unincorporated
W-8 Houlton	Rural residential	Small town	Rural residential	Natural	Unincorporated
W-9 South of Houlton to south edge of St. Croix Station subdivision in North Hudson	Rural residential	Rural residential	Rural residential	Natural	Unincorporated
W-10 South edge of St. Croix Station subdivision in North Hudson o Willow River	Small town	Small town	Small town	Small town	Incorporated
W-11 Willow River to Orange Street	River town	Small town	Small town	Small town	Incorporated
W-12 Orange Street to Interstate 94 bridge	River town	River town	River town	River town	Incorporated
W-13 Interstate 94 bridge to Mayer Road	River town	Small town	Small town	Small town	Incorporated
W-14 Mayer Road to Riverview Drive	Small town	Small town	Rural residential	Rural residential	Unincorporated
W-15 Riverview Drive to St. Croix Cove	Rural residential	Rural residential	Rural residential	Rural residential	Unincorporated
W-16 St. Croix Cove	Rural residential	Small town	Rural residential	Rural residential	Unincorporated
W-17 St. Croix Cove to Black Bass Bar	Rural residential	Rural residential	Rural residential	Rural residential	Unincorporated
W-18 Black Bass Bar to Kinnickinnic State Park	Rural residential	Rural residential	Rural residential	Natural	Unincorporated
W-19 Kinnickinnic State Park	Conservation	Park	Natural	Natural	Unincorporated
W-20 South limits of Kinnickinnic State Park to Cedar St. Croix subdivision	Rural residential	Rural residential	Rural residential	Rural residential	Unincorporated
W-21 Cedar St. Croix subdivision to north end of Prescott	Rural residential	Small town	Rural residential	Rural residential	Unincorporated
W-22 Prescott to Mississippi River	River town	River town	River town	River town	Incorporated

COMPARISON OF LOWER ST. CROIX NATIONAL SCENIC RIVERWAY ALTERNATIVES (WATER USE MANAGEMENT)

RECREATION MANAGEMENT CONCEPTS	PREFERRED ALTERNATIVE [illegible]	ALTERNATIVE A Accommodate increased recreation use levels with few restrictions	ALTERNATIVE B Accommodate increased recreation use levels w[illegible] additional restrictions to minimize user conflicts	ALTERNATIVE C Freeze recreation use at present levels	ALTERNATIVE D Reduce recreation use levels [illegible]	ALTERNATIVE E Maintain present management approach based on 1976 master plan and subsequent [illegible]
Riverwide Concept	River users would continue to find opportunities for a variety of recreational experiences. existing access points would be maintained. if watercraft density increased. more restrictions would be imposed to ensure safe conditions and to avoid conflicts	Use could continue to increase as long as users were not causing significant damage to the riverway's exceptional resources or posing safety hazards to others	River users would continue to find opportunities for a variety of recreational experiences. no new access would be provided or permitted. as watercraft numbers continued to increase. more activity restrictions would be imposed to segregate uses and ensure safe conditions	River users would continue to find opportunities for a variety of recreational experiences. no new access would be provided or permitted. and existing access would be strictly controlled to prevent boat use from increasing. use would be frozen at current levels	River users would find opportunities for a reduced variety of recreational experiences. including social experiences. plus more opportunities would be available for quieter. slower. peaceful recreational experiences in designated areas than currently exist. reduce use levels and density of recreational use of the river	River users would continue to find opportunities for a variety of recreational experiences. no new access would be provided or permitted. more activity restrictions might be imposed to ensure safe conditions if watercraft numbers increased
	Taylors Falls to Arcola Sandbar: Maintain opportunities for quiet and solitude. maintain current slow speed levels. maintain access points	***Taylors Falls to Arcola Sandbar:*** Maintain existing opportunities for quiet and solitude. allow limited growth in use. maintain existing speed levels. maintain current access	***Taylors Falls to Arcola Sandbar:*** Maintain existing opportunities for quiet and solitude. allow limited growth in use. maintain existing speed levels. maintain current access	***Taylors Falls to Arcola Sandbar:*** Maintain opportunities for quiet and solitude. maintain existing use. speed levels. maintain current access	***Taylors Falls to Arcola Sandbar:*** Increase opportunities for quiet. solitude. decrease use levels. decrease access	***Taylors Falls to Arcola Sandbar:*** Maintain existing opportunities for quiet and solitude. allow limited growth in use. maintain existing speed levels. maintain current access
	Arcola to north limits of Stillwater: Maintain existing opportunities for a mix of powerboat and nonmotorized recreation	***Arcola to north limits of Stillwater:*** Allow for increased numbers of people to engage in a variety of uses. allow an increase in use levels. allow boat speeds to increase if safety was not a concern	***Arcola to north limits of Stillwater:*** Maintain existing opportunities for recreation. primarily powerboat recreation. as boating levels increase. additional speed regulations might be imposed to ensure user safety and minimize conflicts	***Arcola to north limits of Stillwater:*** Maintain opportunities for recreation. primarily powerboat recreation. prevent increased use	***Arcola to north limits of Stillwater:*** Increase opportunities for quieter. slower activities. decrease use levels. decrease boat speed	***Arcola to north limits of Stillwater:*** Maintain existing opportunities for recreation. primarily powerboat recreation. as boating levels increased. additional speed regulations might be imposed to ensure user safety
	North limits of Stillwater to Prescott: Maintain existing opportunities for large numbers of people to engage in a variety of uses. one access point would be added near the Allan S. King power plant. overall boat speed limit would be imposed to ensure safe conditions and avoid conflicts	***North limits of Stillwater to Prescott:*** Allow for large numbers of people to engage in a variety of uses. allow use and speed levels to increase. allow an increase in access	***North limits of Stillwater to Afton:*** Increase opportunities for large numbers of people to engage in a variety of uses. allow use and speed levels to increase. maintain existing access. more activity restrictions would be imposed to segregate uses and ensure safe conditions ***Afton to Prescott:*** Impose additional speed regulations to accommodate increasing use while reducing conflicts. maintain existing access. more activity restrictions would be imposed to segregate uses and ensure safe conditions	***North limits of Stillwater to Prescott:*** Maintain opportunities for large numbers of people to recreate on this stretch. primarily power-boat users. maintain existing use levels. maintain existing speed levels. prevent any increase in access	***North limits of Stillwater to Prescott*** Provide opportunities for moderate number of users to engage in a variety of uses. decrease use levels. decrease speed levels. decrease access	***North limits of Stillwater to Prescott:*** Maintain opportunities for large numbers of people to recreate on this stretch. primarily power-boat users. as boating levels increase. additional regulations on boat speeds would be imposed to ensure user safety. maintain current access

COMPARISON OF LOWER ST. CROIX NATIONAL SCENIC RIVERWAY ALTERNATIVES (WATER USE MANAGEMENT CONTINUED)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
B-AA ***Backwaters*** **Taylors Falls Dam to north end of O'Brien State Park**	Natural waters	Natural waters	Natural waters	Natural waters	Quiet waters	Slow speed zone
B-A ***Backwaters*** **North end of O'Brien State Park to Arcola sandbar**	Natural waters	Natural waters	Natural waters	Natural waters	Natural waters	Slow-speed zone
B-B ***Backwaters*** **Arcola sandbar to north limits of Stillwater**	Natural waters	Quiet waters	Natural waters	Natural waters	Quiet waters	No speed limit, but weekend restriction on waterskiing
Main Channel						
C-A Taylors Falls Dam to Rock Island	Quiet waters	Quiet waters	Quiet waters	Quiet waters	Quiet waters	Slow speed zone
C-B Rock Island to the south end of McLeod Slough	Quiet waters	Quiet waters	Quiet waters	Quiet waters	Natural waters	Slow speed zone
C-C South end of McLeod Slough to the Arcola sandbar	Quiet waters	Quiet waters	Quiet waters	Quiet waters	Quiet waters	Slow speed zone
C-D Arcola sandbar to the north limits of Stillwater	Moderate recreation	Active social recreation	Moderate recreation	Moderate recreation	Quiet waters	No speed limit, but weekend restriction on waterskiing
C-E North limits of Stillwater to Catfish Bar	Active social recreation	Active social recreation	Active social recreation	Active social recreation	Moderate recreation	No speed limit, except no-wake at Hudson Narrows and south Hudson Bay
C-F Catfish Bar to the Prescott railroad bridge	Active social recreation	Active social recreation	Moderate recreation	Active social recreation	Moderate recreation	No speed limit, except no-wake at Catfish Bar, Kinnickinnic Narrows and Prescott Narrows

COMPARISON OF LOWER ST. CROIX NATIONAL SCENIC RIVERWAY ALTERNATIVES (OTHER TOPICS)

OTHER TOPICS	PREFERRED ALTERNATIVE	ALTERNATIVE A Directed land development	ALTERNATIVE B Allow growth but maintain the landscape's visual qualities	ALTERNATIVE C Maintain the landscape's visual qualities	ALTERNATIVE D Emphasize resource protection	ALTERNATIVE E Maintain present management approach based on 1976 master plan and subsequent policy
River Crossings	Road and railroad bridges could be replaced with bridges of similar scale in existing corridors; the total number of bridge crossings would not increase	No increase in the number of road or railroad bridges, but the scale and character of bridges could be altered (wider, for example); bridges could be relocated to new sites as long as existing structures are removed	Road and railroad bridges could be replaced within existing corridors; no change in the number, scale or character of the structures would be permitted	Same as alternative B	Same as alternative B	Road and railroad bridges could be replaced within existing corridors and their scale and character altered; the total number of bridge crossings would not increase
	No new utility corridor crossings or increase in size of transmission line towers; new lines could be added to existing crossings; consolidation of utility line crossings would be encouraged	Utility lines could be replaced, increased in scale or relocated to new sites	Utility lines could be replaced within existing corridors; no change in the number, scale or character of the structures would be permitted	Same as alternative B	The number of utility lines could be reduced by consolidation of lines or conversion from overhead to submarine crossings	Utility lines could be replaced or relocated (as long as existing crossings are removed); no change in the number, scale or character of river crossings would be permitted
	Submarine crossings could be expanded or relocated to an existing corridor and new submarine crossings could be permitted if there were no visual impacts. However, the crossing technique having the least impact on the riverway's outstandingly remarkable values and impact on the resource would be required	Submarine crossings could be expanded or relocated; new submarine crossings could be permitted	The number of submarine crossings would remain the same, except that existing utility lines could be relocated to submarine crossings	Same as alternative B	The number of submarine crossings would remain the same; existing utility lines could be relocated to existing submarine crossing corridors	No new submarine crossings would be permitted, but the size and number of lines within existing corridors might be increased
Vegetation Management	Screen structures from view as seen from the river; prevent disturbance of environmentally sensitive areas	Maintain the existing significant plant communities	Maintain the existing significant plant communities	Same as alternative B	Maintain and restore significant plant communities	A vegetation control zone (larger in unincorporated areas than in incorporated areas) would continue to exist, in which large trees could not be cut, but shrubs and small trees could be removed
	Maintain and restore historically and ecologically significant plant communities on state and federal lands; encourage voluntary efforts to maintain and restore significant plant communities on private lands and local government lands	Same as the preferred alternative	Same as the preferred alternative	Same as the preferred alternative	Same as the preferred alternative	No special protection would be provided for significant plant communities
Island and Public Shoreline Management	Day use largely unregulated	Same as the preferred alternative	Same as the preferred alternative	Same as the preferred alternative	Same as the preferred alternative	Same as the preferred alternative
	Camping would be prohibited in two areas north of Stillwater; near Marine-on-St. Croix camping would be prohibited until a comprehensive river use / camping plan was completed and then would be at designated sites only	Camping prohibited in two areas north of Stillwater	Camping prohibited in three areas north of Stillwater	Same as alternative B	Same as alternative B	Same as alternative B
	In other areas north of Stillwater zones would be established that identify where camping would be permitted; designated camping sites would be established if needed	Minor camping restrictions in other areas	Camping north of Stillwater restricted to designated sites	Camping north of Stillwater restricted to designated sites	Camping north of Stillwater limited to a few designated sites	Same as alternative A
	Camping might be restricted to designated sites if needed and a reservation system might be instituted if needed	No camping permit or reservation system	Same as alternative A	Camping permit and reservation systems used	Same as alternative C	Same as alternative A
	Users required to have portable toilets to camp on the Hudson Islands unless the managing agencies or others supply public facilities	No limits on camping on the Hudson Islands (existing conditions)	Users required to have portable toilets to camp on the Hudson Islands	Same as alternative B	Camping on the Hudson Islands limited to a few watercraft; users required to have portable toilets	Same as alternative A

TABLE 19: SUMMARY OF MANAGEMENT STRUCTURE OPTIONS

Management Activities	The states of Minnesota and Wisconsin and the National Park Service would continue to provide staff to the Lower St. Croix Management Commission. The Park Service would continue to provide staff on NPS lands north of Stillwater	Same as preferred option	Same as preferred option	Same as preferred option	Same as preferred option
Policy Development	Lower St. Croix Management commission would be responsible for policy development and review all actions that affect the Lower St. Croix. Organization of the commission would be similar to what it is today, but with the addition of one member from a new organization, the Lower St. Croix Partnership Team, which would be established to advise the commission.	There would be minor adjustments to management roles and responsibilities. The Lower St. Croix Management Commission would continue to set overall policies. The management commission would have a support staff and serve as public information source rather than the Minnesota-Wisconsin Boundary Area Commission	Same as preferred, except that the management commission would be expanded from three members to seven. Same as option 1.	Same as Option 2	The lower riverway would continue to be managed as it is now.
Land Use Management	State rules would be adopted as a basis for local riverway ordinances. The Lower St. Croix Partnership Team would serve as an advisor for the development, amendment and implementation of state rules.	Roles and responsibilities would be similar to what they are now; however the Lower St. Croix Planning Task Force would be restructured and made permanent. The task force would interpret state land use rules and provide mediation services.	Local governments would continue to be responsible for implementing land use regulations, however a new entity, called a Joint Power Board, would oversee land use management. In addition, a citizens review board would be created to serve as an advisor to several land use groups.	Same as option 2, except the method of regulating land use would be that a single riverway board, modeled on the Lower Wisconsin State Riverway Board, would be created.	Roles and responsibilities for land use management would remain as they are today.
Water Surface Use Management	On-water law enforcement would continue to be provided by the five-county sheriff's departments, the two state departments of natural resources, and the National Park Service. The Lower St. Croix Partnership Team would serve as an advisor to the development, amendment and implementation of state rules.	Same as the preferred option. In addition the Lower St. Croix Planning Task Force would be restructured and made permanent to improve coordination among law enforcement agencies.	A new entity, called the St. Croix Water Patrol, would perform all on-water law enforcement.	Same as option 2	Roles and responsibilities for water surface use management would remain as they are today.

TABLE 28: SUMMARY OF IMPACTS OF ALTERNATIVES

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Scenic Resources	Overall, the preferred alternative would have a minor positive impact on scenic resources. Also, potentially major long-term impacts from changes to river crossings would be avoided.	Potentially major long-term impacts from changes to river crossings could occur. Overall, alternative A would have a minor negative impact on scenic resources compared to the no-action.	Overall, alternative B would have a moderate positive impact on scenic resources compared to the no-action alternative. Potentially major long-term impacts from changes to river crossings would be avoided.	Overall, alternative C would have a moderate positive impact on scenic resources. Potentially major long-term impacts from changes to river crossings would be avoided.	Overall, alternative D would have a moderate positive impact on scenic resources. There would be somewhat greater beneficial impacts than the other alternatives because it would pu slightly more land within the management areas that would be more restrictive to development.	Depending on the magnitude of change, there could be minor to major, adverse, long-term impacts on scenic resources.
Recreational Resources	Overall, the preferred alternative would provide minor, possibly negligible, positive impacts on recreational use. However, a few riverway users, those seeking to travel at high speeds and some island campers would be displaced.	Alternative A would be similar to the no-action. Congestion problems would likely continue in narrow sections of the river. Extremely high-speed boating would continue and associated safety and noise concerns would continue in some areas. Increased use could alter the recreational experience, such as creating more crowded conditions at peak use times.	Minor, possibly negligible, positive impacts would be made on recreational use. Some might be negatively impacted by additional regulation. A few riverway users, those seeking to travel at high speeds, and some island campers would be displaced.	Alternative C would have minor positive impacts on recreational use. Some safety concerns would continue where extremely high speed boating occurred occasionally south of Stillwater.	Overall boating use would be slightly reduced. Overall, alternative D would provide minor, positive impacts on recreational use. However, those seeking to travel at high speeds and some island campers would be displaced.	Riverway users would continue to be negatively affected to a minor to moderate extent by congested conditions or safety issues in some areas of the riverway.
Natural Resources	Limited localized impacts on natural resources would occur in connection with residential development, but these impacts would be less than under the no-action alternative. Adverse impacts to listed mussel species could be occurring, and conservation actions would be implemented.	Limited localized impacts on natural resources would occur in connection with residential development; these impacts would be more than any other alternative. Adverse impacts to listed mussel species could be occurring, and conservation actions would be implemented.	Limited localized impacts on natural resources would occur in connection with residential development; these impacts would be similar to but slightly less than the preferred alternative. Adverse impacts to listed mussel species may be occurring, and conservation actions would be implemented.	Limited localized impacts on natural resources would occur in connection with residential development; these impacts would be similar to but slightly less than the preferred alternative. Freezing use levels may not change impacts on listed mussel species.	Limited localized impacts on natural resources would occur in connection with residential development; these impacts would be slightly less than the preferred alternative. Adverse impacts on listed mussel species could be occurring, and conservation actions would be implemented.	Water pollution due to construction would be short term; pollution due to users would be transient and have minor to negligible effects. Impacts on soils, vegetation, and fish and wildlife would be negligible to minor. The Karner blue butterfly's habitat could be adversely affected as well as certain mussel populations.
Cultural Resources	Restrictions on new development and maintenance of historic character of the landscape would minimize potential impacts.	Restrictions on new development and maintenance of historic character of the landscape would minimize potential impacts. Slightly higher potential to impact archeological resources from new development in previously undeveloped areas.	Greater restrictions on new development and maintenance of historic character of the landscape would reduce potential impacts.	Greater restrictions on new development and maintenance of historic character of the landscape would reduce potential impacts.	Greater restrictions on new development and maintenance of historic character of the landscape would reduce potential impacts.	Greater potential for new development and no emphasis on maintaining historic character of the riverway communities would pose higher risk to resources.
Socioeconomic Environment	Positive impacts to the local economy and tourism would be negligible to minor compared to the no-action alternative. Some reduced restrictions on new development in town and some increased restrictions on new development outside of towns. Local landowners would benefit from reduced conflicts with recreational users.	Economic and tourism impacts would be negligible to minor. Conflicts would likely increase between some recreational users and local landowners in some areas, primarily near islands and where the highest boat speeds would be allowed on the lake.	Positive impacts to the local economy and tourism would be negligible to minor. Landowners would benefit from reduced conflicts with recreational users, primarily north of Stillwater and on southern part of lake.	Economic impacts would be negligible. More restrictions on landowner improvements and new development. Local landowners would benefit from reduced conflicts north of Stillwater, but would be negatively impacted by noise and shoreline erosion on the lake.	Economic and tourism impacts would be negligible. More restrictions on landowner improvements and new development. Existing development visible from the river removed when opportunities arise. Local landowners would benefit from reduced conflicts with recreational users along most of the riverway.	Economic impacts would be negligible. Existing restrictions on development would continue. Conflicts would likely increase between some recreational users and local landowners in some areas, primarily near islands and where the highest boat speeds would be allowed on the lake.
Implementation Costs	**One-time costs:** **WI &MN: $55,000** **Local Government: $116,500** **Annual costs:** **WI&MN: $730,000** **Local Government: $83,750** **NPS: $908,000**	**One-time costs:** **WI&MN: $20,000** **Local Government: $100,000** **Annual costs:** **WI&MN: $505,000** **Local Government: $0** **NPS: $904,000**	**One-time costs:** **WI&MN: $55,000** **Local Government: $115,000** **Annual costs:** **WI&MN: $730,000** **Local Government: $76,250** **NPS: $864,000**	**One-time costs:** **WI&MN: $55,000** **Local Government: $115,000** **Annual costs:** **WI&MN: $955,000** **Local Government: $152,500** **NPS: $953,000**	**One-time costs:** **WI&MN: $24,055,000** **Local Government: $115,000** **Annual costs:** **WI&MN: $1,017,500** **Local Government: $152,500** **NPS: $919,000**	**No change**

TABLE 21: SUMMARY OF IMPACTS OF MANAGEMENT STRUCTURE OPTIONS

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Management Approach	There would be the least change from the current management approach. The management commission would be retained and a partnership member added. No managing agency would set authority over local land use decisions. Existing water use enforcement would continue.	Minor change in management approach, with role of the Minnesota-Wisconsin Boundary Area Commission reduced The management commission would be retained and local government representative would be added. The planning task force would have role in land use rules interpretation and mediation and in water use enforcement coordination.	Most change in management approach, with the management commission having greater local representation. A joint powers board and new on-water law enforcement agency (St. Croix water patrol) would be major undertaking.	Same as option 2, except a riverway board would implement local zoning.	No change
Implementation Costs	$100,000 Note: This cost is already included in the preferred alternative under the costs for the Minnesota DNR and Wisconsin DNR (Manager positions).	Annual $260,000 One-time $ 56,000	Annual $710,000 One-time $75,000	Annual $710,000 One-time $75,000	No additional costs would be anticipated.

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Affected Environment

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INTRODUCTION

This chapter describes the environment of the Lower St. Croix National Scenic Riverway. This is the baseline environment that the management alternatives would affect if they were implemented. The focus of this chapter is on scenic resources, recreational use, natural resources, cultural resources, socioeconomic resources, and land use and management that have the potential to be affected by the alternatives. Some features are also discussed because they provide context, must be considered in environmental impact statements based on federal laws, regulations, and orders, and NPS management policies (e.g., wetlands, prime and unique agricultural lands, threatened and endangered species), or reflect issues and concerns expressed by the public and other agencies during the scoping process (see the issues section in the "Introduction" and the "Consultation and Coordination" chapters). The effects of the alternatives on these impact topics are also assessed in the "Environmental Consequences" chapter.

In describing the riverway's environment and particularly in evaluating the impacts of the alternatives, special attention needs to be paid to the riverway's outstandingly remarkable values. The National Wild and Scenic Rivers Act places special importance on the values for which a particular river has been set aside. In the case of the Lower St. Croix, the identified outstandingly remarkable values are its scenic, aesthetic, recreational and geologic values. While both the words scenic and aesthetic are used in the identification of outstandingly remarkable values, they are used interchangeably.

SCENIC RESOURCES

Scenic resources are those landscape features (including the river) that are visible to riverway users. However, not all that is visible from the river is included within the boundaries of the riverway. The following text defines the landscape features of the riverway, starting at the NSP dam going downriver to the confluence with the Mississippi River at Prescott. The river experience changes based on physiography, topography, vegetation type, river characteristics, and the amount and type of development. Distinct sections of the river are described below.

The Dalles of the St. Croix to Rock Island; 3.5 miles

The communities of Taylors Falls and St. Croix Falls lie at the uppermost edge of this river section. These communities are historic in character and have a combination of natural and man-made elements in the landscape. From the dam at Taylors Falls to beneath the Highway 8 bridge the river is a series of rapids. Below the bridge the river proceeds through a deep and narrow gorge with basalt cliffs known as "The Dalles of the St. Croix." Each side of the river along the highly scenic Dalles is protected in state parks. Minnesota and Wisconsin Interstate State Parks both have developed areas surrounded by less developed lands. The developed areas include visitor centers, trails, boat accesses, campgrounds, a canoe rental operation, and a commercial paddle boat/excursion service. Downstream of the Dalles the river valley widens and the St. Croix changes to a shallow, slow-moving river. Tall, forested bluffs line this heavily wooded valley, and there are fewer signs of people with only a small amount of residential development visible on the blufftops. The river narrows again at Rock Island and passes through another basalt rock gorge. Just above Rock Island there is a clear-cut swath up the bluffs from an underground pipeline.

Osceola Area (Rock Island to McLeod's Slough; 10.0 miles)

On this relatively undisturbed stretch of river the natural features are predominant, with few signs of development or recreational support facilities. Except for the small blufftop community of Osceola, only a small amount of development is visible on the wooded blufftops. Most of the lands within the riverway are either NPS fee property or scenic easements. Near the towering cliffs at Cedar Bend much of this forested and agricultural area is protected by land trusts. Throughout this stretch the river winds back and forth across the floodplain, leaving islands and braided channels beneath steep, heavily wooded bluffs. Just below the Swing Bridge — a historic railroad crossing — the river splits into two distinct channels that come together again at the south end of McLeod's Slough. This slough is marked by floodplain forests and extensive backwater marshes. Altogether this stretch of river has a tranquil and natural feel.

Marine Area (McLeod's Slough to Arcola Sandbar via Page's Slough; 8.5 miles)

This stretch of river is similar to the Osceola area but is marked by more residential development, especially on terraces along the Minnesota shore. Moderate development is along the Minnesota shore north of William O'Brien State Park. The National Park Service has a narrow strip of scenic easements along this stretch. In the state park there are recreational facilities, and many people camp, picnic, and hike there. Downstream of the park lies the developed residential shoreline of Marine, which is predominantly historic in character. Page's Slough is another area with residential development on the Minnesota terrace. The shoreline here is also managed by NPS scenic easements. The Wisconsin side of the river is natural in character with few signs of development, and the shoreline is predominantly NPS fee properties with scenic easements nearer the riverway boundary. The river throughout this area flows through a broad floodplain covered with forests and braided channels, bordered by heavily wooded bluffs. Below Marine the main channel is flanked by wooded islands. The river has a relatively slow current and shallow conditions.

Rice Lake Flats (Dead Man's Slough to Arcola Sandbar via St. Croix Islands Wildlife Management Area; 2.5 miles)

This area lies east of Page's Slough and is characterized by a large backwater complex that is unique on the St. Croix. Most of the area is part of Wisconsin's St. Croix Islands Wildlife Management Area, which means that little development is visible. The unit begins with the Dead Man's Slough, which is a braided, island-rich, backwater complex on the Wisconsin side of the river's main channel. From there this portion of the river flows slowly through Rice Lake, a large backwater lake important for migrating waterfowl. The Apple River then enters the St. Croix and forms the Arcola sandbar — an extremely shallow section of the main river channel that serves as a barrier to motorboat traffic from the south. Little development is visible in this reach of the river.

Arcola Gorge (Arcola Sandbar to Head of Lake St. Croix; 5 miles)

The river valley in this area is narrower than in areas to the north or south, and the valley walls are steeper, frequently marked by limestone and sandstone cliffs. Almost the entire valley lies in the floodplain. Limited development is on this stretch with a few homes visible atop the bluffs and more that are noticeable along the Minnesota side than on the Wisconsin side until the southern part of this river section. The historic Arcola High Bridge, 1 mile south of the Arcola sandbar, spans the blufftops and dominates views along the river for several miles. The river flows through a braided channel where there are numerous forested islands. Near the head of Lake St. Croix lies the Boomsite Highway Wayside, a popular roadside picnic area and national historic landmark. The river, natural features, and man-made features shape the landscape of this section of river.

Urban Stillwater (Head of Lake St. Croix to Stillwater Downtown Courtesy Docks; 2 miles)

The river valley here broadens considerably and the river itself becomes lake-like with some islands at the head of the lake. The Wisconsin bluffs descend almost to the water's edge and are largely forested, with some large lot residential properties dotting the blufftops. The Minnesota bluffs are largely set back from the river with a large terrace in-between. On this terrace lies the historic lumbering community of Stillwater — the St. Croix watershed's largest city. Along the Minnesota shore are Stillwater's downtown district, some homes, marinas, and docks, while Lowell Park's seawall abuts the river. The historic highway lift bridge across the river is a dominant visual feature. This section has a more developed feel than the upper sections of the riverway.

South Stillwater-Bayport Area (Stillwater Downtown Courtesy Docks to Andersen Point; 3 miles)

The river here remains broad and lake-like. High bluffs are on either side of the river, although the Minnesota bluffs recede far back from the river's edge. The forested Wisconsin bluffs are similar to the area across from Stillwater: the bluffs descend almost to the water's edge, and the bluff tops are dotted with homes. In contrast to the Wisconsin shoreline, the Minnesota shoreline is the most developed reach of the St. Croix: a commercial drydock, marina, large coal-fired electric generating plant, and large window factory are on the terrace along the shore. Views are strongly impacted by the large power plant and its tall smokestack and by transmission lines that cross the river.

Bayport-North Hudson Area (Andersen Point to Willow River Dam; 2 miles)

This reach of river is again broad and lake-like. Tall bluffs rise from near the water on the Wisconsin side but recede at North Hudson. On the Minnesota shore the wooded bluffs are set back from the river at Bayport and then come back close to the river at the south end of town. Fairly dense residential developments are at North Hudson and Bayport, while homes dot the wooded blufftops on the Wisconsin shore north of North Hudson. A park and a marina line the shore in Bayport, and railroad tracks run along the shore south of town.

Urban Hudson (Willow River Dam to Interstate 94; 2 miles)

Although this stretch of the St. Croix valley is broad, the main river channel is narrow and fairly fast-moving, confined to near the Minnesota shore by dikes built from the Wisconsin shore to accommodate a railroad and two highway crossings. A chain of sandy, sparsely vegetated islands runs along the Wisconsin side of the main channel. On the Minnesota shore the valley bluffs descend near the water's edge on the Minnesota shore, except near the Interstate 94 bridges. On the Wisconsin side the bluffs are set back from the water. This is another highly developed stretch of the riverway, with views dominated by Hudson, another one of the valley's historic lumbering towns, and the two Interstate 94 bridges at the south end of the unit. On the Minnesota side the blufftops have fairly dense residential development, and several homes sit on the floodplain at the river's edge, but there is some natural vegetation and landscaped environments. On the Wisconsin side the residential and downtown neighborhoods of Hudson cover the bluff tops and the river terrace. A park abuts the riverfront downtown, just north of the river's largest marina.

Open Lake (Interstate 94 to Catfish Bar; 4.5 miles)

This is the river's widest and deepest section, nearly 2 miles across and up to 70 feet deep. Tall, wooded bluffs descend to the shoreline on the Wisconsin side. The Minnesota bluffs are far from the shore. A high terrace drops abruptly to the water's edge between Lakeland and Afton. Developments can be found in several areas on this stretch. The Wisconsin blufftops are rimmed by large-lot residential development. More intensive residential development is found at St. Croix Cove, where most homes are on a terrace below the rim of the bluff. The river terrace on the Minnesota side in this section contains five municipalities and fairly dense residential development. A flood control levee fronts the river at Lake St. Croix Beach.

Catfish to Kinnickinnic (Catfish Bar to Kinnickinnic Narrows; 5.0 miles)

The river here is uniformly about a ½ mile wide and fronted by tall, wooded bluffs that drop almost directly into the water. Directly across the river from Afton is Catfish Bar, a large sandbar that juts into the river at the base of a large, wooded bluff. Black Bass Bar, a similar sandbar on the Wisconsin side, lies south of Catfish Bar. Developments and people are common in localized areas. Scattered homes are on the blufftops. The Wisconsin side of the river is rural with natural and manmade features in the landscape. In Minnesota the historic river town of Afton lies in the floodplain, with two marinas, a park, and scattered commercial and residential development along the edge of the river. Just south of town, development thins and closely resembles the rural residential character of the Wisconsin side. Many people use Afton State Park, which offers boat beaching, hiking, and swimming areas. A large electrical transmission line also crosses the river on this stretch.

Kinnickinnic Narrows (Kinnickinnic Narrows; 0.5 miles)

A sandy, forested delta at the mouth of the Kinnickinnic River forces the St. Croix River's channel against the Minnesota bluffs, resulting in a narrow river with a swift current. Kinnickinnic State Park covers the Wisconsin side of the river and is an extremely popular boat beaching and mooring area. Scattered homes sit atop the Minnesota bluff, which drops almost directly into the river.

Kinnickinnic to Prescott (Kinnickinnic Narrows to Mississippi Confluence at Prescott; 6.0 miles)

This area is similar to the Catfish-Kinnickinnic stretch north of the narrows. The river is uniformly about ½ mile wide and fronted by tall, wooded bluffs that drop almost directly into the water. Scattered homes are along the bluffs. The Minnesota side has a mix of rural and natural landscapes. The Wisconsin side has a predominately rural character until the southern edge of this river segment where there are more signs of people and development. Here the eastern shore has the residential and downtown neighborhoods of Prescott, another of the St. Croix's historic river towns. A peninsula extends from the Minnesota shore at the mouth of the river (Point Douglas), forming a natural dam that creates Lake St. Croix. The Point Douglas area has a marina and county park. A highway and railroad bridge cross the river in its last few hundred feet before meeting the Mississippi.

RECREATIONAL USE

Five state parks and one regional park abut the river and provide recreational opportunities including hiking, cross-country skiing, nature observation, swimming, fishing, car-related camping, and other activities. Local parks in communities along the river provide similar opportunities. Considering the proximity to the Twin Cities metropolitan area, it is not surprising that many people access the riverway through these parks. The following summarizes three-year average annual park visitor data for 1996-98:

Minnesota Interstate State Park	364,499
Wisconsin Interstate State Park	338,131
William O'Brien State Park	239,810
Afton State Park	176,748
Kinnickinnic State Park	226,326
St. Croix Bluffs Regional Park	133,754*
Total	**1,479,268**

*Data is for 1998 only; this park opened to the public for the first time in 1997.

Most of the riverway is not accessible by public park or by public road; as a result, much of the riverway is accessed for recreational purposes from the water. Approximately 310,600 people visited the riverway by water in 1997, the most recent year for which data is available. Combined with state and regional park visitation information, the boating information leads to the conclusion that the Lower St. Croix National Scenic Riverway receives approximately 1.8 million visitors per year. Considering that use data is not kept for some local parks that receive heavy use, such as Lowell Park in Stillwater, Lakeside Park in Bayport, Lakefront Park in Hudson, Point Douglas County Park, and the swimming beach in Lake St. Croix Beach, it would be safe to conclude that visitation easily exceeds 2 million visitors per year.

An increasingly popular form of recreation in the riverway is heritage tourism, which attracts visitors to a combination of natural and cultural amenities. In addition to the riverway's scenic character, visitors are also attracted to its historic communities. There is currently no method of determining the number of visitors to the riverway that are attracted by heritage tourism.

Because of its scenic character and high water quality (suitable for body-contact recreation), the riverway is popular for all types of boating recreation. Boating density is a concern along several sections of the river. Riverway managing agencies have agreed that the need for water surface use regulations should be studied when density reaches 15 acres of water per moving boat and should be implemented when density reaches 10 acres of water per moving boat. Density is monitored with aerial photographic surveys, which have been conducted in odd-numbered years since 1977.

Because the river changes character several times through its length, different sections of the river are popular with different user groups. Distinct sections of the river are described below.

RIVER SECTIONS

Backwaters from the Dalles of the St. Croix to William O'Brien State Park: 16 miles

In areas such as Close Slough, Rice Lake, Peaslee Lake, and Lower Lake, and in back channels opposite Osceola, at Cedar Bend, opposite McLeod's Slough and opposite Copas, users will find a narrow and intimate riverine experience that suggests wilderness and provides solitude. The forested islands and shorelines appear undisturbed and water quality is high. Very shallow conditions prevail and motorized craft are rarely seen, even during periods of high water. During low-water periods, even canoes frequently run aground. Few of the river's many users explore these areas, leaving this as a refuge for solitude-seekers.

Backwaters from William O'Brien State Park to Arcola Sandbar: 6 miles

In areas such as Dead Man's Slough, users will find a narrow and intimate riverine experience that provides moderate solitude. In Rice Lake is the designated St. Croix Islands Wildlife Area, a large open backwater similar to those found on the Mississippi River, with vast acres of emergent vegetation and waterfowl habitat. Very shallow conditions prevail and motorized craft are rarely seen, except during periods of high water when they cross the Arcola sandbar from the south and motor slowly through the area. This is an excellent area for wildlife observation, especially waterfowl. For those seeking quiet and solitude, this area is second on the river only to the area described above.

Backwaters from Arcola Sandbar to north limits of Stillwater: 5 miles

The river environment in this area includes a braided channel environment with many forested floodplain islands and narrow side channels, as well as a main channel that moves back and forth across the valley. The very steep bluffs wall the valley with cliffs and sandstone outcrops, creating a very scenic backdrop. Many, but not all of the side channels are accessible to slow-moving motorboats, and there are some island campsites located on the side channels. While the main channel here can be busy and noisy, the side channels offer a quieter alternative.

Dalles of the St. Croix to Rock Island: 3.5 miles

The main river channel here meanders among lush forests and basalt cliffs, creating a scenic backdrop for the on-river experience. The two state parks here provide popular starting points for canoe trips that involve high scenic quality, no rapids to challenge the novice, and enough other people around to make the novice feel safe. Many Twin Cities residents have their first canoe experience here, usually in a group setting; the experience is fairly social, with relatively large numbers of people. Shallow conditions generally ensure that few, if any motorboats are encountered.

Rock Island to McLeod's Slough: 10 miles

The main river channel here is similar to the area immediately north, except the basalt cliffs have been replaced by wooded bluffs. The bridge and landing at Osceola serve as an end-point for many rental canoe trips, so the social nature of the experience diminishes south of Osceola. The river remains shallow and motorboats continue to be uncommon.

McLeod's Slough to Arcola Sandbar: 8.5 miles

After the main river channel emerges from McLeod's Slough, water depth increases enough to permit use by pontoon boats and other shallow-draft motorboats. Shoreline residential development increases, as does the number of docked motorboats. Most canoeists end their trip at William O'Brien State Park. This river segment contains a mixture of nonmotorized and slow-moving motorized craft. The Arcola sandbar itself, created by a delta at the mouth of the Apple River, is extremely shallow during normal river levels and most motorized craft do not cross it.

The section of the riverway north of the Arcola sandbar contains about 42% of the riverway's miles of length and receives about 19% of the total boating use. While large numbers of canoes are occasionally seen between Taylors Falls and Osceola, boating density is generally not a concern north of the Arcola sandbar.

Arcola Sandbar to north limits of Stillwater: 5 miles

The river environment in this area includes a braided channel environment with many forested floodplain islands and narrow side channels, as well as a main channel that moves back and forth across the valley. The very steep bluffs wall the valley with cliffs and sandstone outcrops, creating a very scenic backdrop. The main river channel provides adequate depth for most motorboats. The islands provide many boat beaching sites for island camping and day use, and the steep valley walls provide shelter from the winds that often buffet Lake St. Croix to the south. These factors contribute to this being an extremely popular area among motorboat users, and the recreational activity here is clearly social. This reach of river contains about 9% of the riverway's miles of length and receives about 8% of the total boating use. Boating density in this reach of river has averaged 9.4 acres of water per moving craft since 1983.

Waterskiing is prohibited on weekend afternoons in this area, and designation as a no-wake zone was considered but not enacted in the mid-1990s.

Stillwater to Catfish Bar: 13.5 miles

This naturally wide part of the river is known as Lake St. Croix and is among the most popular boating areas in Minnesota and Wisconsin. It is part of the Upper Mississippi River navigation system, ensuring adequate depth for even the largest recreational vessels (some craft in this area approach 100 feet in length). The widest portions, above and below Hudson, are very popular for sailboat use, and sailing races are held regularly. The narrows area at Hudson includes several sandy islands that are very popular for both day use and camping. The bay between two man-made levees at Hudson is very popular for waterskiing because it is protected from winds that often buffet the open lake. Boating here is a very social experience, and some watercraft travel at high speeds.

The portion of the lake north of Hudson contains about 12% of the riverway's miles of length and receives about 12% of total use; density ranges from about 16 acres of water per moving boat at Stillwater to about 30 between Stillwater and Hudson. The Hudson narrows contains about 2% of the riverway's miles of length and receives about 18% of total use; density here averages 2.2 acres of water per moving craft, making this the riverway's most congested area. The area is currently managed as a no-wake zone. The waterski bay at Hudson contains about 1% of the riverway's length and receives about 1% of total use; density averages about 30 acres of water per moving craft. The southerly bay at Hudson, north of the Interstate 94 bridge, also contains about 1% of the riverway's length; it receives about 4% of total use; density averages 14.7 acres of water per moving craft. The area is currently managed as a no-wake zone. The portion of the lake between Hudson and Catfish Bar contains about 8% of the riverway's miles of length and receives about 6% of total use; density averages 35.9 acres of water per moving craft.

Catfish Bar to Prescott: 11.5 miles

This lower section of Lake St. Croix is narrower than the upper portion of the lake and tall wooded bluffs fall directly into the river. Boat beaching is popular at Catfish Bar and Black Bass Bar, which are privately owned and leased to boating clubs, and at Afton State Park, Kinnickinnic State Park and St. Croix Bluffs Regional Park. Most of the remaining riverfront is privately owned. The narrows area at Kinnickinnic State Park includes a large and extremely popular sandbar for day use and camping. Water depth is adequate for very large craft. Boating here is a very social experience, and some watercraft travel at high speeds.

The river at Catfish Bar contains about 1% of the riverway's miles of length and receives about 4% of total use; density averages 11.4 acres of water per moving craft. The area is currently managed as a no-wake zone. The portion of river between Catfish Bar and the Kinnickinnic Narrows contains about 9% of the riverway's miles of length and receives about 5% of total use; density averages 25.2 acres of water per moving craft. The Kinnickinnic Narows contains about 1% of the riverway's miles of length and receives about 11% of total use; density averages 3.8 acres of water per moving craft. The area is currently managed as a no-wake zone. The bay on the south side of Kinnickinnic State Park contains about 0.5% of the riverway's miles of length and receives about 2% of total use; density averages 4.9 acres of water per moving craft. The area is currently managed as a no-wake zone. The area between the Kinnickinnic Sandbar and Prescott contains about 11% of the riverway's miles of length and receives about 7% of total use; density averages 18.7 acres of water per moving craft. The Prescott Narrows contains about 0.5% of the riverway's miles of length and receives about 3% of total use; density averages 4.6 acres of water per moving craft. The area is currently managed as a no-wake zone.

OVERALL USE

Most recreational use of the riverway occurs during summer months, especially on weekends. Because of its proximity to the Twin Cities, much activity is day use rather than as a vacation destination. Fishing is heavy in early May, and general boating use rises sharply on pleasant weekend days in May and September. During the rest of the year, recreational use of the riverway is low. Some snowmobiling, snowshoeing, and cross-country skiing occur in winter, and ice fishing is popular on Lake St. Croix during the coldest winter months. Cross-country skiing is quite popular in the state parks. On the whole, though, the vast majority of recreational users visit the St. Croix only during summer months.

Watercraft use of the river in summer months increased rapidly during the 1960s, 1970s, and early 1980s, and many users complained about crowding. Water surface use regulations were imposed in the late 1970s in response to concerns about safety and resource impacts. A study of watercraft use in 1971 concluded the river was unacceptably overcrowded. A carrying capacity study conducted in 1977 drew the same conclusion and observed that boating use had increased dramatically in that six-year period. Use began to level off in the 1980s with the only discernable trend being an increase in boat size south of Stillwater.

Watercraft crowding remains a controversial subject on the St. Croix. Since many of the riverway's boaters are seeking a relatively social experience, encountering large numbers of other people on the water does not diminish their experience. For others seeking a less busy environment, the riverway fails to meet their needs and they are displaced to another water body. Boater satisfaction remains artificially high because dissatisfied boaters have already left for other waters. Of the users who remain, those with a long experience on the river and many of them riverfront landowners, are often most concerned about crowding. Boaters access the river through boat launching ramps, marinas, private riparian homes, and from the adjacent Mississippi River. The states can regulate access on the inland waterway system (between the two rivers) to meet certain regulatory needs (such as preventing the spread of exotic species), but not for arbitrary purposes such as controlling overall numbers.

Large numbers of boaters can impact the river's environment in two ways that are worth noting. First, some boaters do not dispose of human waste appropriately, with resulting threats to water quality. Because the river contains a large volume of water, the river's assimilative capacity makes that risk relatively low, but it does exist. Secondly, boaters who visit the river's sandy shorelines and islands can trample vegetation and increase erosion of those easily eroded sandy soils.

CAMPING EXPERIENCE

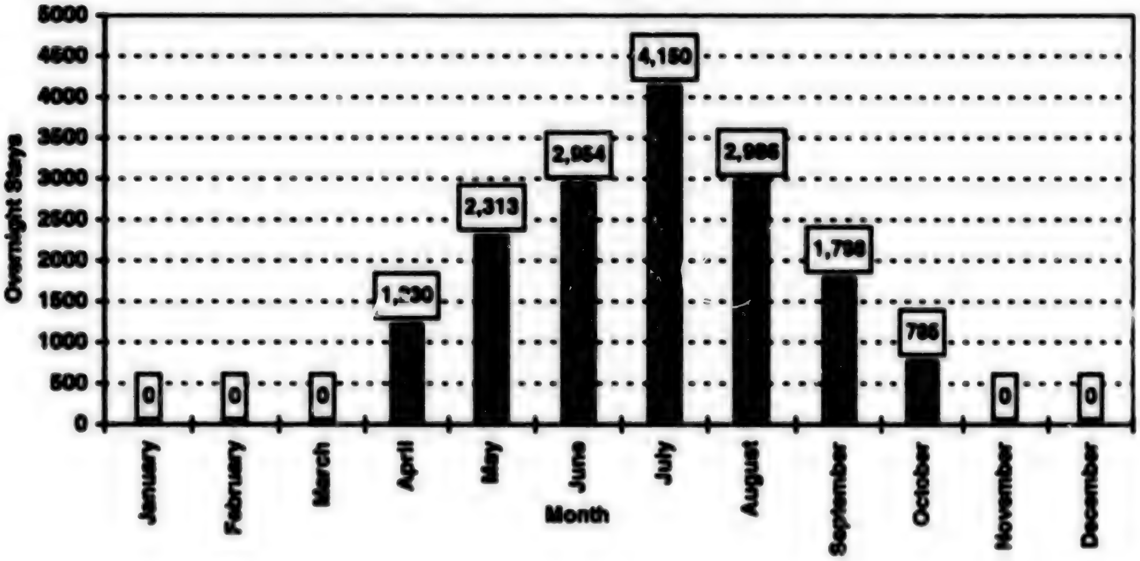
Island/shoreline boat-in camping is the primary type of camping experience offered in the Lower St. Croix. Most campsites are undesignated and are created through recreational use. Camping at informal sites has no limitations on the number of groups or individuals. The island area available for camping use will change within seasons and from year to year due to water level fluctuation.

There is some evidence that the number and complexity of islands has significantly increased between 1969 and 1991. During this same period, data show that the area of the islands had significantly decreased. Such changes have implications for how the island resources may be managed. Car-accessible camping opportunities are limited within the riverway but such experiences are available at nearby state parks and private campgrounds.

Camping use is reported as overnight stays within the riverway. An overnight stay is one person spending one night within the riverway for recreational purposes. Overnight stays are counted separate from recreational users, so they do not correspond exactly. However, overnight use of the riverway accounted for only a minor portion of the riverway's recreational use. Overnight stays for the lower riverway for 1997 are presented in figure A.

Overnight use within the area north of Stillwater in 1997 was 16,216 overnight stays. All overnight stays occurred in April through October; for five months of the year (January, February, March. November, and December) overnight use was nonexistent. The cold weather limits the numbers of campers during late fall and winter. Freezing of the riverway prohibits the usual boating and other warm weather recreational activities. However, the frozen lake then offers opportunities for ice fishing, snowmobiling, and other wintertime activities. Overnight use figures for the riverway south of Stillwater are not collected. However, there is extensive overnight use of the islands near Hudson and other public lands throughout the summer season. July is the busiest month for overnight use throughout the riverway.

Figure A. Lower St. Croix National Scenic Riverway Backcountry Camping (Overnight Stays) for 1997 by Month



Source: National Park Service, Washington Office, Public Use Statistics Program Center

Large numbers of boat-in campers can impact the river' environment in two ways that are worth noting. First, some boat-in campers do not dispose of human waste appropriately, with resulting threats to water quality. Because the river contains a large volume of water, the assimilative capacity makes that risk relatively low, but it does exist. Secondly, boaters who camp on the river' sandy shorelines and islands can trample vegetation and increase erosion of those easily eroded sandy soils.

RECREATIONAL FACILITIES ALONG THE LOWER ST. CROIX

The lower riverway offers parks, recreational sites, wildlife areas, and facilities for river and land-based recreational activities. These recreational facilities are managed by various entities, including the National Park Service, the states of Minnesota and Wisconsin, local governments, and private entities. These public and additional private facilities provide a diversity of visitor use experiences along the riverway, which include canoeing, boating, fishing, swimming, camping, hiking, bicycling, cross-country skiing, and environmental education. The upper sections of the Lower St. Croix from St. Croix Falls/Taylors Falls areas to just north of Stillwater, Minnesota, offer water-based recreational opportunities in a natural setting. The lower sections of the St. Croix downriver from Stillwater to the confluence with the Mississippi River provide an almost lakelike setting that includes more motorized use and larger watercraft. The various recreational facilities along the lower riverway are described below.

National Park Service

The NPS headquarters for the St. Croix National Scenic Riverway is in St. Croix Falls, Wisconsin, just above the Taylors Falls Dam. Facilities available here include a visitor information center, picnic site, and canoe landing. The Eagles Nest area (Minnesota) is 5.3 river miles downstream of the Taylors Falls Dam and offers canoe camping and a landing, water, toilets, and a picnic site. This is a primitive camping site for canoe access only. The next NPS facility along the riverway is the Osceola Landing area on the Minnesota side of the river. This area has a boat launch and canoe landing, fishing pier, and picnic areas with restrooms and drinking water. Somerset Landing (Wisconsin) is 18.2 river miles from the Taylors Falls Dam and offers canoe camping and a landing, boat launch, and toilet facilities. Canoe campsites are also available on NPS-managed islands just above Stillwater, Minnesota. The Lower River Visitor Center in Stillwater is open year-round and provides visitor information and interpretive displays.

Minnesota Department of Natural Resources

Minnesota Interstate State Park is just below Taylors Falls and offers boat ramp access to the river, camping and picnic facilities, hiking trails, and fishing. This park provides 37 camping sites, group campsites for 100 people, canoe rental and shuttle service, volleyball courts, a seasonal visitor center, and 3.5 miles of hiking trails. William O'Brien State Park located just north of Marine on the St. Croix offers a variety of recreational experiences including canoeing, hiking, fishing, and swimming. Camping opportunities include backpack campsites and primitive group campsites (capacity 75) to semi-modern sites (125) with electrical hookups (62). Showers and dump stations are also provided. A boat launch ramp, hiking and cross-country ski trails (9.5 miles), access to country bike trail systems, a year-round interpretive program and visitor center, and picnic grounds (200 tables) with snack bar and shelters are also found here. Winter recreation includes snowmobiling, skate ski, and cross-country ski trails with a warming house provided.

The St. Croix Boomsite public access is above Stillwater and has 20 parking spaces and a boat launch. The next major DNR facility is Afton State Park just south of the city of Afton on bluffs overlooking the St. Croix Valley and river. There is minimal amount of development in the park in order to preserve the natural character of the site. A walk-in backpack campground (24 sites), group campground (two camps), and one canoe campsite are provided with dock, fishing, swimming beach, and river access. The park has a year-round visitor center, a self-guided trail, and two picnic grounds, and offers 18 miles of hiking and cross-country trails, 5 miles of horseback trails, and 4 miles of bike trails.

Wisconsin Department of Natural Resources

Wisconsin Interstate State Park is below St. Croix Falls and provides boat ramp access to the river, camping and picnic facilities, hiking trails, and fishing. It also offers year-round naturalist programs, guided hikes, and the Ice Age Interpretive Center. This park has 85 camping sites with two group camps, 8.9 miles of hiking and 10.6 miles of cross-country ski trails, river and lake fishing, and a swimming beach.

Wildlife management areas such as the St. Croix Islands Wildlife Area offer wildlife viewing, canoeing, hunting, fishing, trapping, and picnicking opportunities. The St. Croix Islands Wildlife Area is downriver from Marine on St. Croix and provides river access to the St. Croix and to the Apple River. The Apple River flows through the wildlife area to join the St. Croix and is known for its tubing opportunities. Also contained within the wildlife area is the Apple River Canyon, which is used by the scientific community for student teaching and research.

Kinnickinnic State Park is on the lower section of the riverway and provides recreational opportunities for swimming, fishing, picnicking, and 7 miles of hiking and cross-country skiing trails. Day-use facilities focus on picnicking and hiking and water-based activities such as water skiing, sunbathing, boat camping, wind surfing, and summertime sports. Campsites (112 sites) have limited facilities. Winter uses include cross-country skiing, ice fishing, hiking, and snowshoeing. The Kinnickinnic River joins the St. Croix at the park and is known for its trout fishing.

OTHER PUBLIC, TOWNSHIP, COUNTY, AND NONPROFIT

Sources of information on river recreation and facilities can be found at the Interstate 94 State Welcome Centers on either side of the St. Croix River in Minnesota and in Wisconsin. These Department of Transportation waysides also provide picnic sites. Public boat ramps and launches can be found at Franconia, Log House, Somerset, and St. Croix Bluffs Regional Park. City boat launch areas include facilities at, Bayport, Hudson, and Afton. Public facilities that provide picnic areas, restrooms, and drinking water are at St. Croix Boomsite Historic Wayside (Minnesota DOT), Lakeside Park (Bayport), Ferry Landing Park (North Hudson), and Lakefront Park (Hudson). Municipal dock access is available at Lowell Park (Stillwater). Public swimming beaches can be found at Kalliner Park, Bayport, North Hudson, Hudson, Lakeland, Troy Beach, Lake St. Croix Beach, Pt. Douglas Park, and Prescott.

Hiking trails and educational programs focusing on the lower river environment can be found at the Carpenter Nature Center north of Point Douglas, Minnesota. This is a private, nonprofit nature preserve and environmental education facility encompassing 600 acres with several miles of hiking trails and an interpretive center. Still in the development phase is the Standing Cedars Community Land Conservancy (Osceola, Wisconsin) that will offer public outdoor recreation and environmental education programs along the Lower St. Croix Riverway.

PRIVATE

Many private marinas and docks can be found along the riverway at Marine on St. Croix, Boomsite, Stillwater, Bayport, Hudson, Afton, and Prescott. Private boat ramps for river access are at Marine on St. Croix, Stillwater, Bayport, Hudson, Lakeland, and Afton. Many of these facilities also provide river access, picnic areas, restrooms, boat docks, and drinking water.

REGIONAL RECREATIONAL FACILITIES AND OPPORTUNITIES

In addition to those recreational facilities directly along the lower riverway, within a 50 mile radius, there are many other regional outdoor recreational areas that provide hiking, biking, equestrian, snowmobile, and cross-country skiing trails; camping facilities; environmental education centers; and river recreational opportunities that include boat and canoe access, swimming, and fishing.

Within this region Minnesota offers three state parks, one national recreation area, two wildlife areas, one state forest, and one national wildlife refuge. St. Croix Wild River State Park (Minnesota DNR) is northwest of Interstate State Park and has 96 semimodern campsites, eight canoe campsites, eight backpack campsites, a trailer dump station, picnic grounds, two river access points, a visitor center and year-round trail center, 35 miles of hiking and cross-country ski trails, 18 miles of horseback trails, a guest house, and two cabins. The Sand Dunes State Forest (Minnesota DNR) has hiking, cross-country skiing, equestrian, and snowmobile trails, campgrounds, swimming beaches, and fishing. The Carlos Avery Wildlife Management Area (Minnesota DNR) west of Taylors Falls/St. Croix Falls offers hunting and a boat ramp with canoe-carry access. Fort Snelling State Park (Minnesota DNR) in the heart of the Minneapolis/St. Paul area has 150 picnic sites, a swimming beach, toilets, river and lake fishing, boat and canoe access, 18 miles of hiking trails, 18 miles of skiing trails, 5 miles of biking trails, a golf course, recreational fields, and an interpretive center. The Mississippi National River and Recreation Area includes 72 miles of river environment flowing through the Twin Cities metropolitan area to the confluence of the St. Croix River. Frontenac State Park (Minnesota DNR) near Lake Pepin provides bird viewing opportunities, 58 campsites, one group campsite, 15.4 miles of hiking trails, a 2.5-mile self-guided trail, 6 miles of cross-country ski trail, 8 miles of snowmobile trails, a picnic area, and fishing. Wildlife management areas that provide wildlife viewing and recreational activities include the Sherburne National Wildlife Refuge (U.S. Fish and Wildlife Service) northwest of Minneapolis and the Gores Pool No. 3 Wildlife Management Area (Minnesota Department of Natural Resources) southeast of Minneapolis. Other Minnesota areas include the Upper Mississippi National Wildlife and Fish Refuge, the Sandstone National Wildlife Refuge, the Kettle State Wild and Scenic River, the Mississippi State Wild and Scenic River, the Rum State Wild and Scenic River, and Nerstrand Big Woods State Park.

Wisconsin has three additional recreational areas within the region of the lower riverway. Willow River State Park (Wisconsin DNR) northeast of Hudson provides campground facilities (72 sites), beach and boat lake access, nature center, and hiking and nature trails (10.2 miles). Hoffman Hills Recreation Area (Wisconsin DNR) near Menomonie has an outdoor group camp for youth groups, an observation tower, a self-guided nature trail, and hiking/skiing trails. The Red Cedar Trail (Wisconsin DNR) is also near Menomonie.

Long distance trails in the region provide links between scenic natural areas and also connect natural areas with residential parks and developments. The Minnesota Gateway Trail is a bike trail connecting St. Paul to Pine Point Park and is a segment of the Willard Munger Trail that runs as far north as Duluth. The Willard Munger Trail is a 164-mile multiuse Minnesota state trail that offers hiking, bicycling, snowmobiling, cross-country skiing, and horseback riding. The 50-mile Gandy Dancer Trail in Wisconsin is used by hikers, bikers, snowmobilers, and ATVs and connects St. Croix Falls to Danbury. The Ice Age Trail is a 500-mile-long hiking and horseback riding trail that traverses the glacial landscape of Wisconsin with a trailhead at the Interstate Park below St. Croix Falls. Also found in Wisconsin is the Red Cedar State Trail that is a 14.5-mile hiking, biking, and cross-country skiing trail paralleling the Red Cedar River from Menomonie to the Chippewa River Valley.

The 200 miles of riverine environment of the Upper St. Croix National Scenic Riverway complement the recreational activities in the Lower St. Croix by providing different types of experiences. The upper river offers more primitive, wilderness-like experiences with river conditions containing mostly class I rapids (small waves with few or no obstructions) and some class II rapids (wide clear channels with waves up to 3 feet). The upper riverway's flowages at Hayward, Trego, and Taylors Falls provide slack water for small powerboat activities and deep-water fishing. The numerous public recreational areas surrounding the Upper St. Croix provide a wide range of outdoor recreational activities and facilities, which occur in primarily wilderness like settings.

CLIMATE

The climate is subhumid continental, with long, snowy, cold winters and relatively short, warm summers. Average annual precipitation in the St. Croix Basin ranges from 28–32 inches. About 75% of the annual precipitation falls from May to September (Baker *et al.* as cited in USGS 1996). Average daily maximum temperatures reach 85° in July and 23° in January. Early spring months are cool and rainy, with June usually being the wettest month of the year. During summer and early fall, the weather becomes progressively drier. Snowfall contributes about 15% of the total annual precipitation; annual snowfall averages about 45 inches per year in the St. Croix basin, most of which is in February and March. Much of the river is usually frozen from November until April, with the exception of the Narrows, whose width and faster current keep the water ice-free most of the winter.

AIR QUALITY

In general, air quality and visibility are usually good in the lower St. Croix area. However, there is some evidence of pollution from the Minneapolis/St. Paul (Twin Cities) area. Adjacent to the river at Stillwater, Minnesota, is the Allen S. King Power Plant, a coal-fired facility. The Twin Cities area and Allen S. King plant appear to be the major sources of pollution along the lower riverway. Regional haze conditions are noticeable on many days throughout the year (NPS 1995a). Under certain meteorological conditions, layered haze forms from nitrogen oxide emissions from the King Plant.

National Ambient Air Quality Standards for certain major air pollutants, including sulfur dioxide, nitrogen oxides, particulate matter, ozone, carbon monoxide, and lead, were established under the 1970 Clean Air Act Amendments. Areas in the United States that meet or exceed these standards are known as attainment areas. Areas in which the standards are not met are nonattainment areas.

The southwestern part of Wisconsin from Prescott (Pierce County) to St. Croix Falls (Polk County) is in attainment with all national ambient air quality standards. Overall, Minnesota is in compliance with nitrogen dioxide, sulfur dioxide, and lead ambient air quality standards. The Twin Cities seven-county area, which includes Washington County, is in nonattainment for carbon monoxide. However, the state is applying for redesignation to attainment based on the lack of carbon monoxide standards violations in recent years. An ozone monitoring site is in Washington County, which monitors downwind concentrations of ozone emanating from the Twin Cities area. This monitoring site is in attainment with the old 1-hour ozone standard. However, recent promulgation of the new 8-hour standard calls for reassessment at the end of 1998 monitoring season, at which time the attainment status will be reassessed. The Twin Cities seven-county area also has a limited problem with particulate matter (PM10) in the downtown St. Paul area. EPA's promulgation of a new particulate standard (PM2.5) calls for monitoring to determine status. That new monitoring program will start in 1999.

The 1977 Clean Air Act Amendments established a program to preserve, protect, and enhance the air quality in clean air areas of the United States. The riverway was designated as a class II clean air area. Air quality standards, known as increments, were established for these areas for certain air pollutants, including sulfur dioxide, nitrogen oxides, and particulate matter, from new or modified existing major stationary sources. Under this designation, limited development can be permitted in the vicinity of the riverway as long as the levels of particulate matter, sulfur dioxide, and nitrogen dioxide do not exceed the class II increments.

PHYSIOGRAPHY AND TOPOGRAPHY

The Lower St. Croix National Scenic Riverway is 52 miles long, from the Northern States Power Dam at Taylors Falls/St. Croix Falls to the confluence with the Mississippi River. The watershed of the lower river consists of 1,470 square miles; approximately 1,053 square miles in Wisconsin and 417 square miles in Minnesota. Three major tributary streams, the Apple, Willow, and Kinnickinnic Rivers, all in Wisconsin, drain much of this lower river watershed.

The lower St. Croix changes markedly along this 52-mile course. Through the upper 27 miles, the river flows through a relatively narrow valley and is primarily characterized by shallow water and many islands, braided channels, and backwaters. At Taylors Falls/St. Croix Falls river flow is affected by a hydroelectric dam that produces fluctuating flows downstream. From the dam, rapids extend to a deep and narrow gorge with basalt cliffs, known as the Dalles. Downstream of the gorge the valley widens and the St. Croix changes to a shallow, slow-moving river. Tall, forested bluffs line the heavily wooded valley. At Rock Island the river narrows and passes through another basalt rock gorge. Below Rock Island, the river winds back and forth across the floodplain, leaving islands and braided channels beneath steep, heavily wooded bluffs. Just below the Swing Bridge (historic railroad crossing) the river splits into two distinct channels, that come together again at the south end of McLeod's Slough. This slough is marked by floodplain forests and extensive backwater marshes. The river continues to flow through a broad floodplain, with many braided channels, including Page's Slough. East of Page's Slough, on the Wisconsin side of the river's main channel, is a large, island-rich, backwater complex, which includes Dead Man's Slough and Rice Lake. Downstream of Rice Lake, the Apple River enters the St. Croix and forms a delta that includes the Arcola sandbar — an extremely shallow section of the main channel that serves as a barrier to motorboat traffic from the south. From the Arcola sandbar downstream to the head of Lake St. Croix the river valley is narrower, and the valley walls are marked by limestone and sandstone cliffs. The river flows through a braided channel with numerous islands, although the main channel provides adequate water depth for large watercraft.

Through the lower 25 miles, the river valley broadens considerably and the river itself becomes lake-like. The head of Lake St. Croix lies near Stillwater, Minnesota. High bluffs line both sides of the valley. On the Wisconsin side, tall bluffs rise from near the water, receding back from the river near North Hudson. The Minnesota bluffs largely set back from the river, coming closer to the water south of Bayport. The river remains broad and lake-like, although it becomes narrow and fairly fast-moving near Hudson, where a chain of sandy, sparsely vegetated islands runs along the Wisconsin side of the main channel. South to Catfish Bar is the river's widest and deepest section, nearly two miles across and up to 70 feet deep. From Catfish Bar to the Kinnickinnic narrows the river is about 1/2-mile wide and fronted by tall bluffs that drop almost directly into the water. Catfish Bar, which is directly across from Afton, is a large sandbar that juts into the river at the base of a large, wooded bluff. Black Bass Bar, a similar sandbar on the Wisconsin side, lies south of Catfish Bar. The Kinnickinnic narrows is formed by the sandy delta at the mouth of the Kinnickinnic River, which forces the river channel west, against the Minnesota bluffs. Below the narrows the river is much like the Catfish Bar to Kinnickinnic stretch. The river is uniformly about 1/2-mile wide and fronted by tall, wooded bluffs that drop almost directly into the water. A peninsula extends from the Minnesota shore at the mouth of the river (Point Douglas), forming a natural dam that creates Lake St. Croix. Water levels are further influenced by Lock and Dam #3 at Red Wing, Minnesota.

LAND USE / LAND COVER

A comprehensive land use / land cover study was undertaken by the Minnesota – Wisconsin Boundary Area Commission in 1993 (Stewardship of the Lower St. Croix River and its Watershed, MWBAC, 1994).

Analysis compared land use in 1972, when the Lower St. Croix was first designated as a national scenic riverway, and 1991, reflecting then current land use characteristics. Recent land use patterns and proximity to the Twin Cities metropolitan area continue to influence the riverway.

Today, the fastest-growing land use in the St. Croix basin is urban. The acreage of urban land in the watershed doubled from 1973 to 1991, growing from 3% of the total land area to 6% of the total land area of the watershed. That growth has taken place primarily in western St. Croix County and eastern Washington County. Along the Lower St. Croix itself, there are some areas where land use / land cover change has been even more dramatic. Where the northern portion of the Lower St. Croix is largely influenced by National Park Service fee and scenic easement acquisition, the southern portion of the Lower St. Croix (i.e., between Stillwater, MN and Prescott,WI) is largely influenced by private residential development. Densities in this area range from larger homesteads to more dense urban lots in small town and outlying subdivision developments.

Other land use patterns are fairly reflective of characteristics identified in 1972. Larger river towns like Stillwater, and Hudson, and smaller communities like Osceola, Marine on St. Croix and Afton continue to be prominent in the riverway corridor. Limited industrial development includes the Alan S. King Generating Plant in Oak Park Heights and Andersen Window Corporation in Bayport. Undeveloped shoreland and bluff areas, and state as well as local park areas are also found throughout the riverway.

The area has been transformed from a presettlement mixture of forest, prairie and wetland natural habitat to a watershed that in the 1990s, was about 56% cultivated agricultural land, 25% forest, 7% water and wetlands, 6% grassland, and 6% urban.

GEOLOGY

Geologic resources are one of the three outstandingly remarkable values for which the riverway was designated. The basalt formations form the Dalles, along with potholes and other geologic features left by glacial meltwater.

The wide, deep valley of the St. Croix was formed approximately 9, 000 years ago when large volumes of water drained glacial Lake Duluth. Underlying the riverway surface features are a variety of bedock formations, which consists of Precambrian sandstone, lava flows, Cambrian sandstone, and dolomite. The unconsolidated material under most of the basin ranges from 100 to 200 feet in thickness. In the vicinity of the lower St. Croix River, the basin is characterized by flat-topped, steep-sided hills with narrow stream valleys. Below St. Croix Falls, the river flows through both ground and end moraines. The Dalles geological formations at Taylors Falls and St. Croix Falls are basalt overlain by sandstone and conglomerate. High bluffs of limestone and sandstone are distinctive features below Taylors Falls to Prescott. The area south of Bayport to Afton on the Minnesota side is characterized by nearly level terraces composed of sand and gravel. The riverway substrate is gravel and cobble in the high velocity areas and coarse to fine sand in the slower reaches.

The potential for sand and gravel development in and near the riverway continues to increase due to urban development. Within the riverway, two private pits are being expanded. The Park Service holds scenic easements on many of the private lands within the upper portion of the riverway, but easements will not prevent mineral development on lands of split estate ownership, where sand and gravel is part of the subsurface estate. The NPS 1984 *Land Protection Plan* allows the riverway to purchase mineral rights if deemed necessary to protect its resources.

SOILS

Soils on the Wisconsin side of the lower St. Croix River formed primarily in glacial outwash and a small portion formed in glacial till. Polk County general soils are characterized by well drained and somewhat excessively drained loamy and sandy soils on pitted outwash plains. St. Croix County general soils are characterized as well drained and somewhat excessively drained, medium to moderately coarse textured soils on outwash plains and stream terraces. The soils on the Minnesota side of the lower St. Croix are generally characterized as very poorly to moderately well-drained loamy and sandy soils that formed in alluvial deposits and glacial till. However, the soils vary along the riverway, and also include soils formed primarily in a sandy or loamy mantle over bedrock and in sandy alluvium, silty mantle and the underlying sandy outwash, silty mantle over bedrock, and glacial outwash.

Prime and unique soils are important farmland and orchard production soils best suited to food, feed, forage, and fiber. They can be cultivated land, pasture, or woodland. It does not include developed or water areas. In Wisconsin, numerous areas of prime farmland have been identified between St. Croix Falls and Prescott along and adjacent to the lower St. Croix NSR in Polk, St. Croix, and Pierce Counties. According to individual Natural Resources Conservation Service (NRCS) county soil surveys, in Wisconsin, more than 54 designated prime and unique farmland soil types can be found in or along the riverway. On the Minnesota side of the lower St. Croix at least 34 prime and unique farmland soil types have been identified that lie along the riverway in Chisago and Washington Counties. Shoreline areas and some bluff areas in the riverway are generally sandy and easily eroded.

WATER RESOURCES

Streamflow of the St. Croix River has been monitored at St. Croix Falls since 1902. Average discharge through 1990 is 4,206 cubic feet per second (cfs). Seasonally, highest flow is in the spring, from melting snow, rains falling on melting snow, or heavy rains falling on saturated soils. The largest dam on the river is the Northern States Power Company (NSP) dam spanning the river at Taylors Falls, Minnesota, and St. Croix Falls, Wisconsin. The dam was specifically authorized by Congress in 1903 and consequently predates Federal Energy Regulatory Commission (FERC) requirements. Because the dam is operated on a daily peaking schedule, water level fluctuations are experienced above and below the dam. In 1931, minimum flows of 1,600 cfs were established from April 1 to October 31 of each year. Then in 1989, the NSP agreed to an 800 cfs minimum flow for the rest of each year. Negotiations are underway between NSP and riverway managing agencies to increase winter minimum flows.

The lock and dam system on the Mississippi River at Red Wing, Minnesota, has a profound influence on the water level in the lower riverway. That system was built in the 1930s when flow in the St. Croix was at a historical low. It was built to maintain a flat pool level in Pool 3, which includes the lower St. Croix, at a level of 675.0 feet above mean sea level at the Stillwater gauge. At 675.0, the river is 3 to 5 feet above its pre-dam level. However, when the level is higher than 675.0 the effect of the lock and dam on the St. Croix is minimal or nonexistent (Steve Johnson, MDNR, personal communication, 1996 as cited in NPS 1997).

Both Wisconsin and Minnesota recognize the quality of the water of the St. Croix Riverway and give most of it the highest level of protection allowed. Wisconsin classifies the St. Croix River as Exceptional Resource Water (ERW) from the northern city limit of St. Croix Falls to 1 mile below the State Highway 243 bridge at Osceola. From this point to the northern boundary of the Hudson city limits, it is classified as an outstanding resource water (ORW). Then, from Hudson to the confluence with the Mississippi River, the St. Croix is classified as an ERW. Waters classified as ERW require that any increases in existing discharges must meet the water quality standards for "fish and aquatic life purposes" and any new discharge is required to meet "background" conditions of the receiving water. For ORW segments of the river both new and increased discharges must meet "background" conditions. In Minnesota, the entire lower St. Croix River, is designated as outstanding resource value waters - restricted (ORVW-R). This designation requires that a proposed new or increased discharge would not be allowed unless there was no prudent and feasible alternative.

The overall water quality of the riverway is considered to be good relative to other river systems within the region (Troelstrup *et al.* 1993). In general in the St. Croix River, alkalinity, pH, conductivity, nitrogen, turbidity, and phosphorus increase downstream, while oxygen tends to decrease (NPS 1997a). Graczyk (1986) and Boyle *et al.* (1992) also showed increasing nutrient and chlorophyll *a* concentrations downstream along the riverway. Increasing nutrients, turbidity, chlorophyll *a*, and decreasing oxygen could be the result of the more fertile soils in the lower basin, but may also suggest increasing human impacts downstream along the riverway. Sources of nutrients in the St. Croix River include municipal sewage, industrial wastes, septic tanks, feedlot discharges, detergents, fertilizers, plant detritus, animal waste, soil erosion, stormwater runoff, phosphate-bearing rock, precipitation and atmospheric deposition. Sources of sediments include erosion of soils and scouring stream channels.

Preliminary data (Boyle *et* al. 1992, Graczyk 1986) suggest that many tributaries on the riverway have higher sediment and nutrient concentrations than the river itself.

Water quality variables usually are well within acceptable water quality criteria. There were some isolated instances of water quality criteria (EPA 1994, 1995 as cited in NPS 1997a) being exceeded, based on historical data from four sites that were monitored on the lower St. Croix. EPA criteria were exceeded for some parameters, primarily fecal coliform, cadmium, copper, and lead; mercury, nickel, zinc, fluoride, pH, dissolved oxygen, and turbidity were also exceeded, but even less frequently. It should be emphasized that the frequency of times the above criteria were exceeded was relatively low. For example, dissolved oxygen was below criteria once and only at Taylors Falls, and was typically well above the EPA recommended level necessary to maintain fish populations.

Results of an anti-degradation analysis (Breidt *et al.* 1991 as cited in NPS 1997a) on dissolved oxygen, organic nitrogen, and phosphorus on a lower St. Croix River site at Hudson, Wisconsin, showed that water quality has not degraded, with the possible exception of organic nitrogen, since establishment of the riverways.

Fifteen municipal and industrial permitted waste water facilities discharge directly to the St. Croix River. Thirteen of these discharge to the lower riverway. Troelstrup *et al.* (1993) examined compliance evaluation reports for NPDES dischargers during 1982-92. Discharger compliance with permitted limits has generally been good. Most violations were minor and short-term, involving some combination of total suspended solids, residual chlorine, biochemical oxygen demand and/or fecal coliform bacteria. The Allen S. King power plant and the municipal wastewater treatment plant at Taylors Falls, St. Croix Falls, Osceola and Hudson had the greatest number of permit violations (NPS 1997a).

The lower riverway has several communities along its banks with potential storm sewer drainage (St. Croix Falls, Taylors Falls, Osceola, Stillwater, and Hudson). These existing communities along with increasing development along the river increase the potential for storm water impacts. Potential pollutants include sediment, nutrients, oxygen-demanding organic materials, bacteria, pesticides and toxic pollutants (heavy metals), and hazardous organic compounds (Kim *et al.* 1993). These can cause increased turbidity, lower oxygen levels, human health hazards, and contaminated biota including fish.

Minnesota and Wisconsin polychlorinated biphenyls (PCB) fish consumption advisories have been issued for six fish species in the Marine on St. Croix area and nine species below Stillwater. Contamination levels showed an increasing downstream trend. Mercury consumption advisories have been issued for five fish species in the Marine on St. Croix area and two species below Stillwater (Minnesota Department of Health 1994, Wisconsin Department of Natural Resources, Dept. of Health, 1994 as cited in NPS 1997a). Past sampling for PCBs by the Minnesota Pollution Control Agency and the Wisconsin Department of Natural Resources have shown the presence of PCBs in both fish and sediment. Heavy metals have also been found in fish tissue in the lower portions of the St. Croix River.

An indicator of exceptional water quality of the St. Croix River is the presence of 40 species of native mussels. Based on water quality data (Fago and Hatch 1993), at present water quality standards are high and do not pose a threat to the mussel community (Hornbach, D. J. 1996). A number of water quality factors can limit the distribution and abundance of mussels. These include suspended solids, dissolved oxygen, ammonia, calcium, and pH. In addition, toxic compounds such as heavy metals, pesticides, and herbicides can influence mussel populations. Increase levels of sediment can affect metabolism and feeding.

The principal bedrock in which groundwater occurs along the St. Croix are sedimentary strata. The groundwater in the riverway area is generally satisfactory for most domestic, public, and industrial and irrigation uses (Kanivetsky as cited by USGS 1996). However, the geology of the St. Croix River basin makes the basin's groundwater vulnerable to contamination, which has the potential to produce negative impacts on the quality of water in the St. Croix River. Groundwater contamination may result from both point and non-point sources; point sources are generally related to spills of hazardous material and improper waste disposal, whereas non-point sources are most frequently related to application of fertilizers and pesticides on agricultural, residential, and commercial lands.

FLOODPLAINS AND WETLANDS

Flooding is most likely on the lower St. Croix River from snowmelt in the spring and occasionally from intense storms in the summer. But flooding happens at other times of the year as well. The regional 100-year flood is generally used to delineate the limits of floodplains for regulatory purposes. A peak discharge of about 58,100 cfs can be expected on the St. Croix River at St. Croix Falls once every 100 years and has a 1% chance of occurring in any one year (i.e., the 100-year flood). Peak elevation at St. Croix Falls, Wisconsin, for the 100-year flood is 718.5 feet. Table 22 shows peak discharge rates of selected intervals at St. Croix Falls. The Federal Emergency Management Agency (FEMA) has mapped the 100-year flood boundary for much of the riverway for flood insurance rates. No base flood elevations were determined by FEMA.

Wetlands are lands where saturation with water is the dominate factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Within the riverway, wetlands exist primarily on the riverine edge. The types of wetlands found within the lower riverway include wet meadows, ponds , sloughs, seeps, and marshes.

Different classification systems have been used to map wetlands along the lower riverway. On the Minnesota side of the St. Croix, wetlands have been mapped (1:24,000 scale) using the U.S. Fish and Wildlife Service's Classification of Wetlands and Deepwater Habitats of the United States (USFWS 1979). About 500 acres of the land within the riverway boundary of the Minnesota side is classified as wetland.

TABLE 22: ST. CROIX RIVER DISCHARGE RATES AT ST. CROIX FALLS, WISCONSIN

Interval	Discharge rate in cubic feet per second
2 year	22,300
5 year	33,200
10 year	40,000
25 year	47,800
50 year	53,100
100 year	58,100

Wetlands in Wisconsin have been mapped using a different classification system developed by the state of Wisconsin. This system is also based on the U.S. Fish and Wildlife Service's Classification of Wetlands and Deepwater Habitats of the United States, but with a few simplifications to make it easier to understand and use. About 1,030 acres of the lands within the riverway boundary on the Wisconsin side of the St. Croix are classified as wetland.

Glenn-Lewin *et al.* (1992) surveyed wetlands along the federal zone of the riverway. Based on inventory and reconnaissance sampling and assessment, the riverway's wetlands are in excellent condition. There was little evidence of disturbance, erosion loss, or sedimentation.

VEGETATION

The St. Croix watershed has dramatically changed since Euro-American settlement of the 1840s–150s. Presettlement landcover in the lower St. Croix basin was primarily dominated by river-bottom forest, oak openings and barrens, prairie, and big woods. In Wisconsin, the major plant communities in Polk County consisted of the southern-hardwood forest, while the vegetation along the St. Croix in St. Croix and Pierce Counties was primarily oak savanna. In Minnesota, vegetation along the riverway in Chisago County consisted primarily of hardwood forest and in Washington County, a mixture of hardwood forests, brushland, and grassland. The watershed now is a mosaic of habitat fragmented by suburban, agrarian, and recreational developments. The makeup is 56% cultivated agricultural land, 25% forest, 7% water and wetlands, 6% grassland, and 6% urban.

Historically, presettlement forest acreage was more than double what it is today. Some very important remnants of natural vegetation exist in the watershed, and many of the most significant ones are found along the river.

The lower St. Croix Riverway is ecologically significant for many reasons. A mosaic of biological communities occurs along the riverway, including southern hardwood forests, oak savannahs, and lowland forests. Moreover, the riverway provides an edge zone where land meets water, which creates diverse habitats for both aquatic and terrestrial species. Several special habitats are rare or unique in this region: bedrock outcrops, oak savannahs, and floodplain islands harbor their own special plant associations and wildlife populations. With its variety of habitats, soil types, and landforms, the riverway is considered to be a hot spot from a biodiversity standpoint, supporting a rich fauna and flora population.

In general, vegetation communities in the lower riverway consist primarily of northern hardwood and river floodplain forest, with south and southwestern facing slopes in the lower reaches covered by grasslands typified by sand, basalt bald, and hill prairies. Vegetation types include: river floodplain (river bottom forest), dry oak forest (Wisconsin bluffs), mesic oak forest, maple-basswood forest, lowland hardwood forest, white pine-hardwood forest, mixed emergent marsh, river beach, and to some degree oak woodland brushland and bedrock prairie (remnants). Plant community distribution along the riverway is governed by a variety of considerations, such as soil type, landform, aspect, slope, and moisture. For example, lowland hardwood forests occur on mineral soils. Lowland communities are also strongly influenced by the periodicity and duration of flooding as well as proximity to the water table.

Several aquatic plant communities can be distinguished along the lower riverway. Algal communities, composed mainly of blue-greens, greens, yellow-greens, diatoms, and Cryptophyta are found in both standing and moving water. Community composition and abundance vary according to seasonal changes and local river influences. Stagnant or backwater areas are more likely to experience "blooms" than moving water.

Little information is available on nonvascular plants in the riverway. Wetmore (1991) studied lichens at 77 sites along the entire riverway. He observed that the riverway had a diverse lichen flora, with a total of 265 identified species. Most of the species were found along the whole length of the riverway — 10 were found south of Taylors Falls, and a number were on the basaltic rocks around Taylors Falls.

Nonnative or exotic plant species are found throughout the riverway on lands that have been disturbed by human activities and on lands populated by seeds from lands adjacent to or near the riverway. In 1985 more than 80 exotic plant species were listed for the upper and lower riverway (NPS 1985). Some of the more pervasive and aggressive exotics found on the lower riverway include purple loosestrife, spotted knapweed, Eurasian watermilfoil, curly pondweed, Tartarian honeysuckle, buckthorn, and reed canary grass.

WILDLIFE

The St. Croix River supports one of the most diverse mussel populations in the upper Mississippi River system, with 90% of the potential mussels species being in the area (NPS 1995a). There have been a number of surveys for freshwater mussels in the St. Croix River. Hornbach (1996) reported 40 species of mussels. The density and richness of the mussel communities is quite high. There are two particular areas of high density and species richness on the lower riverway. The Interstate Park and Lakeland sites are found in the two major habitats in the lower St. Croix — Interstate in the riverine portion and Lakeland in the lacustrine portion. Little of the variation in mussel density and richness is explained by physical habitat parameters. It appears that host distribution may greatly influence the distribution of mussel species in the St. Croix. The native mussels have a host-fish requirement to complete their life cycle.

Terrestrial invertebrates have not been well studied on the lower riverway, and little data exist for most aquatic macroinvertebrates. Common groups of aquatic invertebrates known in the lower riverway include worms, insects, leeches, snails, clams, crayfish, and mussels. In their review of studies that have been done in the St. Croix River basin from 1966–1991, Fago and Hatch (1993) found specimen records for 291 species for the lower St. Croix River based on a study done 1966–75. Most of the specimens were collected on the mainstem of the St. Croix, with a few on tributaries near their confluence's with the mainstem. Most of the invertebrate specimens collected were insects, including mayflies, stoneflies, caddis flies, dragonflies, beetles, and true flies. A dragonfly species, the St. Croix snaketail (*Ophiogomphus susbehcha*), is of special interest: this newly discovered species was first found along the middle reaches of the St. Croix in 1989.

Boyle et al. (1992) observed significantly reduced densities and taxa richness of invertebrates from below the dam to the confluence with the Apple River. Fluctuating flows from power-peaking activities at the dam may be influencing invertebrate communities. Similar effects were found downstream of the Osceola wastewater treatment plant outfall. Downstream declines in macroinvertebrate species richness were also reported by Montz *et al.* (1991 as cited in NPS 1997a).

Fifty-two mammals have been observed in the lower riverway. There is very little baseline information on the distribution and abundance of mammals within the lower riverway; most data are limited to fur bearers and game species. Many mammals may use the riverway as a travel corridor, moving north and south. Habitat fragmentation as a result of residential development has likely reduced the use of the riverway as a travel corridor for some mammals, especially sensitive species such as gray wolf (Canis lupus), mountain lion (Felis concolor), and bobcat, which are now rarely seen in the riverway. The white-tailed deer (*Odocoileus virginanus*) is the big game animal most likely to be seen by river travelers. The riverway is surrounded by good to excellent deer habitat. Other mammals likely to be seen by the average river traveler in and near the water include mink (*Mustela vison*), weasel (*Mustela sp.*), striped skunk (*Mephitus mephitus*), river otter (*Lutra canadensis*), muskrat (*Ondatra zibethicus*), beaver (*Castor canadensis*), woodchuck (*Marmota monax*), and raccoon (*Procyon lotor*). Smaller mammals in the area include gray and red squirrel (*Sciurus carolinensis* and *Tamiasciurus hudsonicus*), masked shrew (*Sorex cinereus*), short-tailed shrew (*Blarina brevicauda*), eastern mole (*Scalopus aquaticus*), little brown myotis (*Myotis lucifugus*), big brown bat

(*Eptesicus fuscus*), deer mouse (*Peromyscus maniculatus*), and meadow vole (*Microtus pennsylvanicus*). The mice and voles prefer the plains and meadows, while the shrews and moles prefer wetter areas bordering the river.

The lower riverway also supports a diverse population of upland and water birds. At least 133 species are known to breed within the lower riverway. Birds that river travelers would most likely see include song sparrow (*Melospiza melodia*), American crow (*Corvus brachyrhinchos*), common yellowthroat (*Geothlypis trichas*), great-crested flycatcher (*Myiarchus crinitus*), house wren (*Troglodytes aedon*), eastern phoebe (*Sayornis phoebe*), white-breasted nuthatch (*Sitta carolinensis*), tree swallow (*Iridoprocne bicolor*), blue jay (Cyanocitta cristata), and northern rough-winged swallow (*Stelgidopteryx ruficollis*). Birds commonly seen in the winter include black-capped chickadee (*Poecile atricapillus*), downy and hairy woodpecker (*Picoides pubescens* and *Picoides villosus*), and purple finch (*Carpodacus purpureus*). Raptor species present, at least seasonally, along the lower riverway include: osprey (*Pandion haliaetus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), broad-winged hawk (*Buteo platypterus*), sharp-shinned hawk (*Accipter striatus*), American kestrel (*Falco sparverius)* and bald eagle. Upland game bird species most frequently seen in the area are ruffed grouse (*Bonasa umbellus*), American woodcock (*Scolopax minor*), and wild turkey (*Meleagris gallopavo*), which was recently reintroduced in Polk County.

The St. Croix Riverway is considered to be productive for wood ducks (*Aix sponsa*) and mallard *(Anus platyrhynchos*). Hooded mergansers (*Lophodytes cucullatus*) also nest along the riverway, and use by Canada geese (*Branta canadensis*) is increasing. Waterfowl that are likely to be seen include mallard, blue-winged teal (*Anas discors*), common and red-breasted merganser (*Mergus merganser* and *Mergus serrator*), ring-necked duck, wood duck, and Canada goose.

The north-south orientation of the St. Croix Riverway attracts and makes it an important route for migrating birds (NPS 1995a). It connects the western Great Lakes with the Mississippi flyway. Millions of birds annually pass along the riverway in spring and fall migrations. The riverway provides important nesting and breeding habitat for bald eagles and other resident and seasonal birds.

Generally, there are very little data on reptiles and amphibians from the St. Croix River. In 1993-1995 a reptile and amphibian survey conducted by the U. S. Forest Service (Deahn Donner Wright) found seven species of reptiles (turtles), four herptofauna species (salamander/ newts), seven species of amphibians (toad/frog) and four species of lizard/snakes.

The variety of aquatic habitats in the riverway supports both warm and cold water (only in tributary streams in the lower riverway) fisheries, including both small and large stream species. Fish fauna in the lower riverway may be strongly influenced by fish movement to and from the Mississippi River. There are also significant differences in the fish species in the upper and lower riverway. Fago and Hatch (1993) listed 22 species in the lower mainstem that were not in the upper mainstem and 18 species in the upper mainstem that were not in the lower mainstem. The dam at Taylors Falls/St. Croix Falls is likely a major cause of this variation, preventing fish movement from one segment of the river to another, possibly keeping some species from former spawning grounds, and impacting freshwater mussel communities.

Historically, 83 fish species have been reported from the lower St. Croix mainstem. Of these, 15 species have not been observed since 1975 — shovelnose sturgeon (*Scaphirhynachus platorynchus*), goldeye (*Hiodon alosoides*), skipjack herring (*Alosa chrysochloris*), pallid shiner (*Notropis amnis*), river shiner (*N. blennius*), bigmouth shiner (*N. dorsalis*), weed shiner (*N. texanus*), longnose dace (*Rhinichthys cataractae*), yellow bullhead (*Ameiurus natalis*), brown bullhead (*A. nebulosus*), stonecat (*Noturus flavus*), tadpole madtom (*N. gyrinus*), banded killifish (*Fundulus diaphanus*), mud darter (*Etheostoma asprigene*), and least darter (*E. microperca*). For the lower St. Croix basin, 103 species have been historically reported, although the number of species dropped to 95 since 1975.

There are also a few known exotic species in the lower riverway. One species of particular concern is the zebra mussel. With the introduction of the exotic zebra mussel into the Great Lakes and subsequently within the Upper Mississippi River in the early 1990s, this invasive species poses a serious threat to the biological and recreational resources of the riverway. The primary mode of zebra mussel dispersal is through boat movement from infested waters into uninvested waters. Of primary concern is the potential impact on native mussels. As well, zebra mussels pose a serious threat to the commercial and recreational boating industry.

Eight zebra mussel sightings have been reported for the lower St. Croix from 1994 –1996 (Hornbach 1996). In July 1997, juvenile zebra mussels were found on a monitoring device in the St. Croix River. They were 53 miles north of the Mississippi River/St. Croix River confluence. A further search of the river substrate, native mussels, docks, boats, and dam breakwall was conducted, but no additional zebra mussels were found (NPS 1997b). There are no known breeding populations within the riverway.

Also, the non-native rusty crayfish has been detected in the riverway, but range, population, and impact are unknown. There has been little monitoring of habitats and changes in habitat that could potentially affect the biological communities they support (NPS 1997a). It has been documented as displacing native crayfish and presents a threat to biological diversity in the watershed (NPS 1995b).

Several fish species have been introduced in the lower St. Croix River, including the common carp (*Cyprinus carpio*), rainbow trout, and brown trout.

THREATENED AND ENDANGERED SPECIES

The lower St. Croix River serves as a refuge for a number of species that are threatened, endangered, or of special concern. The U.S. Fish and Wildlife Service identified four endangered and one threatened species that are federally protected in the counties of the lower riverway. Likewise, the Minnesota and Wisconsin Departments of Natural Resources also maintain lists of threatened and endangered species in their states. Table 23 lists federal and state listed threatened and endangered species that have been recorded in the lower riverway.

Native mussels are the most rapidly declining faunal species in the U.S. The St. Croix River has one of the richest freshwater mussel communities in the world (Troelstup and Foley 1993) and serves as a major refuge for both globally and regionally endangered mussel species. Two mussel species, the winged mapleleaf and Higgins' eye, are listed as federally endangered species. The only known population of the winged mapleleaf mussel is found in the St. Croix River, just downstream of Interstate Park. Hornbach *et al.* (1996) found that this species was found in areas of highest mussel density and richness. The Higgins' eye is found in the St. Croix from Interstate Park to the confluence with the Mississippi River; a significant concentration exists at the Hudson Narrows. In addition to the two federally listed mussel species, there are 15 other species of mussels that are state listed as either threatened or endangered. For many of the listed species the St. Croix River supports the most important surviving populations of the species in Minnesota and Wisconsin.

The federally endangered American peregrine falcon nests on the smokestack at the Allen S. King power plant in Bayport. They have been nesting there since at least 1990. The riverway serves as important bald eagle habitat. The federally threatened bald eagle commonly nests in the tall trees scattered along the lower St. Croix River. Most of these eagles migrate in the winter, although some overwinter where there is open water. There are no current or historical records for federally endangered Karner Blue Butterfly within the lower riverway. In 1983 this butterfly was recorded within 1 mile of the riverway boundary just north of Hudson. This species is associated with pine barrens and oak savannas that support wild lupine (*Lupinus perennis*), the butterfly's host species. In addition to the listed species, the U.S. Fish and Wildlife Service and both state departments of natural resources maintain lists of species of concern.

Further information is needed on these species to determine if it is appropriate to consider them for addition to the federal and state lists of endangered and threatened species. The Fish and Wildlife Service identified 17 animal and 5 plant species of concern as possibly being within the riverway; the Wisconsin DNR has identified 18 animal and 17 plant species of concern; and the Minnesota DNR has identified 22 animal and 9 plant species of concern.

Additionally, in Wisconsin, high quality natural communities have been identified for protection along the lower riverway. The Minnesota County Biological Survey has identified natural and rare species areas having highest priority for protection along the lower riverway that are within/ bordering the riverway boundary in Minnesota. See appendix E for the lists of species of concern and natural communities.

TABLE 23: FEDERAL & STATE THREATENED AND ENDANGERED SPECIES

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Eastern Spotted Skunk *Spilogale putorius*					X	
Peregrine Falcon *Falco peregrinus anatum*		X				X
Bald Eagle *Haliaeetus leucocephalus*	X		X			
Richardson trumpeter swan *Cygnus buccinator*					X	
Red-shouldered Hawk *Buteo lineatus*			X			
Cerulean Warbler *Dendroica cerulea*			X			
Wood Turtle *Clemmys insculpta*					X	
Blandings Turtle *Emydoidea blandingii*					X	
Timber Rattlesnake *Crotalus horridus*					X	
Crystal Darter *Ammocrypta asprella*				X		
Gilt Darter *Percina evides*			X			
River Redhorse *Moxostoma carinatum*			X			
Greater Redhorse *Moxostoma valenciennesi*			X			
Pallid Shiner *Notropis amnis*				X		
Goldeye *Hiodon alosoides*				X		
Skipjack Herring *Alosa chrysochloris*				X		
Blue Sucker *Cycleptus elongatus*			X			
Speckled Chub *Macrhybopsis aestivalis*			X			
Paddlefish *Polyodon spathula*					X	
Higgins' Eye *Lampsilis higginsi*		X		X		X
Winged Mapleleaf Mussel *Quadrula fragosa*		X		X		X
Wartyback Mussel *Quadrula nodulata*						X
Spectacle case *Cumberlandia monodonta*				X		X
Rock pocketbook			X			

[illegible]						
Arcidens confragosus						
Monkey Face Mussel *Quadrula metanevra*			X		X	
Pistolgrip (Buckhorn) Mussel *Tritogonia verrucosa*			X		X	
Salamander Mussel *Simpsonaias ambigua*			X		X	
Elephant-ear Mussel *Elliptio crassidens*						X
Purple Wartyback Mussel *Cyclonaias tuberculata*				X	X	
Snuffbox Mussel *Epioblasma triquetra*				X	X	
Butterfly Mussel *Ellipsaria lineolata*				X	X	
Mucket Mussel *Actinonaias ligamentina*					X	
Elktoe Mussel *Alasmidonta marginata*					X	
Ebonyshell Mussel *Fusconaia ebena*						X
Round Pig Toe Mussel *Pleurobema coccineum*					X	
Washboard Mussel *Megalonaias nervosa*					X	
Shoepnose Mussel *Plethobasus cyphyus*						X
[illegible]						
Karner Blue Butterfly *Lycaeides melissa samuelis*		X				X
[illegible]						
Bog Bluegrass *Poa paludigena*			X		X	
Dotted Blazing Star *Liatris punctata var nebraskana*				X		X
Kitten Tails *Besseya bullii*			X		X	
Carolina Anemone *Anemone caroliniana*				X		
Small Skullcap *Scutellaria parvula var parvula*				X		
Ground Plum *Astragalus crassicarpus*				X		
Rough-seeded (prairie) Fame Flower *Talinum rugospermum*						X
False Mermaid *Floerkea proserpinacoides*					X	
Blunt-lobed Grapefern *Botrychium oneidense*						X
Fernleaf False Foxglove *Aureolaria pedicularia*					X	
James' Polanisia						X

[illegible]						
Cristatella jamesii						
Narrow-leafed Pinweed *Lechea tenuifolia*						X
Forked Chickweed *Paronychia fastigiata*						X
Brittle Prickly-pear *Opuntia fragilis*			X			
[illegible]						
A species of Lichen *Parmelia stuppea*					X	

CULTURAL RESOURCES

HISTORICAL OVERVIEW

The complex history of the St. Croix River is a story of human interaction with and exploitation of a rich and diverse riverine environment. As a natural passage between the Great Lakes and the Mississippi Valley, the river has for centuries facilitated exploration and commerce, migration and conflict. The valley's natural resource wealth has drawn numerous cultures — Native American, European, and Euro-American — to use, and often exploit, the landscape for furs, timber, and water power. Even now the St. Croix's water quality, recreational potential, and near-wilderness solitude draws thousands of visitors.

Native American cultures have occupied the lands along the St. Croix River for thousands of years. Archeological sites in the riverway have yielded evidence of diverse hunting and gathering cultures that span the archaic, woodland, and Mississippian periods. The artifacts unearthed in these sites include lithic points and tools, pottery shards, and copper beads and jewelry. Many of these sites appear to have been only temporary campsites; others, however, were permanent settlements. The archeological evidence describes a gradual economic and cultural evolution from strictly hunting and gathering to the development of subsistence agriculture, although hunting and gathering remained important parts of Native American economies.

By the mid-17th century, the Dakota tribe had established control over the St. Croix. They came into conflict with Chippewa, or Ojibwa, who had moved West, attracted in part by the area's furbearing animals. The resulting clashes over hunting grounds resulted in sporadic conflict between the Dakota, their allies the Fox, and Chippewa, for the next 175 years.

Competition for furs largely defined the region's economy for almost two centuries, and created the initial incentive for Europeans to explore the St. Croix. The first verified European incursion in the St. Croix occurred in 1679, when Daniel Greysolon, the Sieur du Luth, canoed upstream on the Brule River, a small stream that flows into the southwestern portion of Lake Superior. From the upper reaches of the Brule, du Luth traversed a short portage to the headwaters of the St. Croix. He then descended the river and attempted to mediate a settlement between the Dakotas and the Chippewa. French explorers continued to use the St. Croix as the gateway between the Great Lakes and the Mississippi River.

Over the next century, French voyageurs regularly paddled the waters of the St. Croix, forging relations with the valley tribes and trading European goods for furs. Even after France's defeat in the French and Indian War in 1763, French-Canadian traders maintained their commercial contacts in the St. Croix Valley. The fur trade remained a vital part of life along the St. Croix in the first decades of the 19th century as powerful rival fur companies from Canada competed to monopolize the traffic in furs harvested by the valley's native inhabitants. The Northwest Company, the XY Company, and the Hudson's Bay Company all staked claims in the St. Croix Valley. These British companies relied heavily on French contacts who had earlier formed familial and diplomatic relationships with the Chippewas.

American expansion along the upper Mississippi River and the St. Croix had begun soon after the turn of the 19th century. Lieutenant Zebulon Pike explored the headwaters of the Mississippi in 1805 and also negotiated treaties with the Dakotas to acquire sites along the Mississippi and the mouth of the St. Croix for future military installations. In 1820, the United States Army began construction of Fort Snelling at the confluence of the Mississippi and Minnesota Rivers. The military presence secured a foothold for other Americans who moved into the area to compete with British and Canadian fur traders. Kenneth McKenzie of the Columbia Fur Company established a post in 1819 near what is now Taylors Falls, Minnesota. The powerful American Fur Company absorbed McKenzie's firm in 1827 and expanded its reach into the upper reaches of the St. Croix River once controlled by the Northwest Company.

With the establishment of the Wisconsin territory in 1836, exploratory expeditions alerted Americans to the immense potential of the St. Croix's white pine forests. The 1837 treaty with the Chippewas opened the door to legal settlement in the valley. Entrepreneurs, many of whom were experienced lumbermen from established timber regions in New England, began small-scale logging and sawmill operations in the St. Croix valley.

By the 1840s numerous small communities like Marine on St. Croix, Stillwater, Taylors Falls, St. Croix Falls, and Hudson had sprung up around lumber mills on both sides of the river. In little more than a decade, mills on the St. Croix were cutting millions of board feet of logs. Logging camps were rafting logs in such quantities that the river was frequently jammed for weeks at a time, damming the river and halting navigation on its lower reaches from the Dalles to the confluence with the Mississippi. In 1883 a colossal logjam at the Dalles stopped the flow of water for 57 days. Ironically, the rush to exploit the great white pine forests often threatened to destroy the river's commercial navigation. Throughout the second half of the 19th century, the St. Croix served as one of nation's major arteries for the transport of cut timber.

Because of its enormous resources, the St. Croix valley played an important part in the post-Civil War urbanization of the West. Many Midwestern cities used the valley as a valuable hinterland, exhausting the St. Croix's vast, old-growth timber reserves to fabricate cheap, high-quality building materials for cities and towns throughout the Mississippi valley. The region's insatiable appetite for wood products put increasing pressure on the St. Croix's timber resources. In 1850 observers had predicted that the valley's forest reserves would last 50 years. By the turn of the century, they were proved correct, as residents began to anticipate the "total annihilation of [the] lumber business." Although the last log run through the Stillwater Boom was not made until 1914, most of the seemingly endless stands of white pine had long been reduced to vast wastelands of stumps.

While the St. Croix's fur and timber resources were depleted, the river continued to serve as a significant natural resource in its own right for recreational and utilitarian uses. As early as the 1850s, the river was recognized for high-quality recreational hunting and fishing. Soon after the end of the logging era, utility companies constructed dams to generate hydroelectric power. The river's limited navigation and relative freedom from industrial pollution combined to maintain the river's high water quality. The St. Croix retained its integrity as a recreational resource even as dozens of the nation's rivers were virtually destroyed by urban and industrial waste.

Congress passed the National Scenic and Wild Rivers Act to preserve rivers remarkable for their scenic, recreational, and primitive qualities. The St. Croix's remarkable features led to its inclusion as one of the eight rivers protected under the original Wild and Scenic Rivers bill. In 1968 the upper St. Croix National Scenic Riverway was placed under the jurisdiction of the National Park Service.

The Wild and Scenic Rivers Act originally excluded the lower St. Croix River. Some recreationists and property owners along the St. Croix feared such a designation's impact on their property rights and ability to use the rivers. However, many others saw unrestrained development as a greater threat to the riverway than increased federal involvement. Years of study and political debate over the lower river's future led to its designation as a Wild and Scenic River on October 25, 1972. A portion of the lower St. Croix is under the jurisdiction of the National Park Service; the remainder is under the control of Minnesota and Wisconsin. The lower St. Croix has emerged as a working example of a "partnership park." Federal and state officials continue to work together to ensure the long-term protection of this valuable resource.

PHYSICAL RESOURCES

Previous cultural resource work for the St. Croix National Scenic Riverway includes three major archeological surveys. These surveys were conducted from 1976–79, 1981–84, and 1992–94. In 1976 the Wisconsin and Minnesota Historical Societies, under contract to the National Park Service, conducted surveys for historic structures within the riverway boundary for potential nomination to the National Register of Historic Places. One property was identified and subsequently purchased by the riverway. Other properties were identified but not purchased by the federal government. An administrative history for the riverway, completed in 1994, documents the historical context of the riverway's creation and past management. The NPS Midwest Regional Office is continuing work on the list of classified structures, the historic resource study, and the cultural landscape inventory for the riverway.

HISTORIC STRUCTURES

No structures owned by the National Parks Service are known to be eligible for listing on the National Register of Historic Places. The 1976 surveys provided baseline information. The Wisconsin survey identified one bridge in the Lower St. Croix that met eligibility criteria, the Soo Line Railroad Bridge. It was listed on the National Register and remains in private ownership. The Society noted three additional properties of historic interest that also remain in private ownership. The Minnesota survey identified 17 potentially eligible properties. The Park Service purchased one of those structures, the Foster summer residence. Unfortunately after years of restoration work , fire destroyed the house in 1986. Arson was the suspected cause.

Since then all structures acquired by the riverway have been reviewed for historic value by Park Service staff and regional specialists and submitted to the state historic preservation offices for consultation when appropriate, before any actions have been taken. None have been found eligible. When the historic resource study and list of classified structures are completed, they will help determine if any remaining structures are potentially eligible.

Outside the Park Service jurisdiction, many historic structures remain within the Lower Riverway. This includes historic districts as well as individual properties, which are important resources that add to riverway's character (see appendix F).

ARCHEOLOGICAL RESOURCES

The archeological surveys conducted between 1976 and 1979 for the upper/original St. Croix National Scenic Riverway identified 217 sites on the riverway. These surveys designated 22 of these sites as endangered and in need of further evaluation. The NPS Midwest Archeological Center (MWAC) began a three-year testing program in 1981 to evaluate the significance and condition of these 22 sites. None of these endangered resources were along the lower St. Croix, however. In 1992 MWAC began the first archeological survey of the lower St. Croix. This effort, which concluded in 1994, identified an additional 66 sites in the riverway. Some of these sites are considered significant and potentially eligible for listing in the National Register of Historic Places.

Subsequent compliance surveys have identified additional sites. The Midwest Archeological Center now lists 326 archeological sites in the riverway in its archeological sites management information system.

Some archeological sites in the lower riverway are listed on the National Register of Historic Places. These include the St. Croix River Access Site (21 WA 49) in Interstate State Park in Washington County, Minnesota; the Dalles Bluff Site, in Polk County, Wisconsin; and rock art sites in Washington and Chisago Counties, Minnesota.

CULTURAL LANDSCAPES

The St. Croix Valley clearly exhibits the effects of human habitation and alteration of the riverine environment. Some settings within the riverway may be determined to be important illustrations of the cultural impacts on the riverway. The National Park Service is required to identify and protect significant historic or cultural landscapes under its jurisdiction.

The NPS Midwest Regional Office has begun work on a cultural landscape inventory. This inventory will identify the significant cultural or historic landscapes that are owned by the National Park Service. These landscapes may include logging sites, recreational areas, and river towns and communities. The character of adjoining properties will be documented to determine significance and integrity.

This inventory, like the List of Classified Structures, will in part depend on the historic resource study to establish the appropriate historical context for the evaluation of landscape significance. Again, the historic resource study may not be completed before the cultural landscape inventory.

ETHNOGRAPHIC RESOURCES

Ethnographic resources can encompass any of the numerous cultural or natural resources managed by the National Park Service, including traditional cultural properties. Among the more common ethnographic resources are sacred and traditional use sites, traditional properties, ceremonial sites and areas, and sites and features from the prehistoric or historic periods. Other cultural resources, including buildings, structures, and archeological sites, may also constitute ethnographic resources.

Less obvious resources, such as vegetation, wetlands, wildlife, waterways, landscapes, and other natural features, may also qualify as ethnographic resources. Determinations of their status as ethnographic resources will be made on research and consultation with the affected groups. These resources will then be assigned traditional legendary, religious, subsistence, or other significance in the cultural system or group traditionally associated with them.

As part of the overall effort to identify and inventory significant ethnographic resources in the riverway, the National Park Service will work with the affected bands of the Chippewa Indian Nation and the Minnesota and Wisconsin State Historic Preservation Offices. They will identify and protect archeological and historic sites as well as cultural landscapes that have significant associations for the area's traditional cultures.

Appendix F contains an inventory of sites within or immediately adjacent to the riverway that are listed or are eligible for listing on the national register.

SOCIOECONOMIC ENVIRONMENT

REGIONAL SETTING AND LAND USE CHARACTERISTICS

The five-county region bordering the riverway is comprised of Chisago and Washington Counties in Minnesota, and Polk, St. Croix, and Pierce Counties in Wisconsin. From Taylors Falls south to the Mississippi River, the region surrounding the riverway becomes more and more developed. Increasing frequency of human-made structures and other non-natural intrusions are noticeable from and along the St. Croix River. Several larger towns are found along the banks of the river, including Osceola, North Hudson, Hudson, and Prescott in Wisconsin, and Marine-on-St. Croix, Stillwater, and Afton in Minnesota. All of the lower riverway is within a one-half to 1-hour drive of the Minneapolis and St. Paul Metropolitan region. Relatively easy access to the riverway is within the reach of more than 2.5 million people.

The national scenic riverway is a primary feature of the region. Adjacent to its length are a few state parks. These public lands and the access they provide are a popular recreational resource for the people of Minnesota and Wisconsin. The recreational resources of these counties serves as the basis of a local tourism industry. As with most tourism it is highly seasonal in nature dependent on the weather even in the summer season.

The five-county region is less developed than the nearby urbanized and industrialized Minneapolis-St. Paul area. The juxtaposition of rural-urban, open space-developed land, and leisure attraction-work place provides a large part of the area's recreational appeal and sets the stage for large numbers of visitors to become temporary outdoor recreation users of the area.

SERVICES

All necessary services are found within the region surrounding the scenic riverway. However, availability depends on location, with the highest concentration and greatest variety of services being found in the Minneapolis-St. Paul metropolitan area. Along the river, services are concentrated in the nearby towns. The quantity and quality of services depend on the population of the town and surrounding service area.

POPULATION

Populations of the states of Minnesota and Wisconsin, the five-county region surrounding the Lower St. Croix National Scenic River, as well as the Minneapolis-St. Paul Metropolitan Statistical Area and entire country are presented in table 24. As shown in the table, the years from 1980 to 1995 were ones of population growth for the geopolitical areas.

Population growth in the five counties has varied from 1980 to 1995. Washington County grew by more than 73% while Pierce County grew at a rate of only 10.7%. All five counties experienced growth rates that were greater than the respective state averages. During this 15-year period, only Polk and Pierce Counties grew at rates that were lower than the national average of 15.7%.

ECONOMY

All five counties have services and state and local government among their top three industries in terms of earnings (see table 25). Manufacturing and retail trade are also important within the region. Compared to the Minneapolis-St. Paul Metropolitan Statistical Area, the five county region has a relatively small economy as measured by earnings. This is to be expected given the relative population difference between the two areas.

Average county per-capita incomes for Chisago, Polk, and Pierce Counties were consistently below the national average and the respective state averages (see table 26). The average county per-capita incomes for Washington County were consistently above the national average and the Minnesota state average. In 1995 St. Croix County's per capita income was higher than both the state and national averages. Minnesota's 1995 average per-capita income was 103.2% of the national average while Wisconsin's was only 96.1% of the national average.

The states of Minnesota and Wisconsin both experienced unemployment rates and poverty rates that were below national averages (see table 27). Unemployment and poverty are less of a problem in St. Croix and Washington counties, than in the other three. The five counties present a varied picture when comparisons to state and national data are made.

TABLE 24: LOWER ST. CROIX NATIONAL SCENIC RIVERWAY
POPULATION DATA AND PERCENTAGE CHANGE FOR SELECTED YEARS

	Population			
State/County/ Other	1980	1990	1995	% change 1980 to 1995
Minnesota	4,085,017	4,387,209	4,614,613	12.96%
Chisago	25,819	30,723	37,014	43.36%
Washington	114,207	147,040	197,824	73.22%
Wisconsin	4,712,045	4,902,197	5,122,100	8.70%
Polk	32,561	34,887	37,288	14.52%
St. Croix	43,522	50,491	54,836	26.00%
Pierce	31,251	32,805	34,607	10.74%
MSA*	2,206,545	2,548,262	2,730,060	23.73%
United States	227,224,719	249,397,990	262,889,634	15.70%

* Minneapolis-St. Paul Metropolitan Statistical Area consists of the following counties: in Minnesota; Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Washington, and Wright; and in Wisconsin; St. Croix, and Pierce.

Source: Regional Economic Information System 1969-95, Bureau of Economic Analysis, Economics and Statistics Administration, U.S. Department of Commerce, August 1997.

TABLE 25: ST. CROIX NATIONAL SCENIC RIVERWAY
TOP THREE INDUSTRIES IN 1995 IN TERMS OF EARNINGS

Primary Economic Sectors in Terms of Earnings in 1995				
State/County	Industry and Percent of Total Earnings	Industry and Percent of Total Earnings	Industry and Percent of Total Earnings	Total Earnings (Thousands of $)
Minnesota	Services (26.0%)	Durable Goods Manufacturing (12.9%)	State and Local Government (11.4%)	$82,301,748
Chisago	Services (26.5%)	State and Local Government (14.6%)	Durable Goods Manufacturing (13.5%)	$297,023
Washington	Services (20.0%)	Durable Goods Manufacturing (18.5%)	State and Local Government (15.0%)	$1,713,964
Wisconsin	Services (22.6%)	Durable Goods Manufacturing (18.0%)	State and Local Government (12.0%)	$80,827,045
Polk	Services (20.1%)	Durable Goods Manufacturing (17.0%)	State and Local Government (15.0%)	$328,820
St. Croix	Durable Goods Manufacturing (22.4%)	Services (20.5%)	State and Local Government (11.9%)	$628,346
Pierce	State and Local Government (32.8%)	Services (17.3%)	Retail Trade (9.2%)	$254,693
MSA *	Services (26.6%)	Durable Goods Manufacturing (13.1%)	State and Local Government (10.0%)	$58,689,762

* Minneapolis-St. Paul Metropolitan Statistical Area consists of the following counties: in Minnesota; Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Washington, and Wright; and in Wisconsin; St. Croix.

Source: Regional Economic Information System 1969-95, Bureau of Economic Analysis, Economics and Statistics Administration, U.S. Department of Commerce, August 1997.

TABLE 26: LOWER ST. CROIX NATIONAL SCENIC RIVERWAY
PER CAPITA INCOME FOR SELECTED YEARS

	Per Capita Income		
State/County/ Other	1980	1990	1995
Minnesota	$10,146	$19,373	$23,937
Chisago	$9,120	$15,931	$19,355
Washington	$10,673	$[illegible],083	$25,388
Wisconsin	$9,879	$17,721	$22,285
Polk	$8,329	$14,074	$17,702
St. Croix	$9,802	$18,749	$23,629
Pierce	$9,030	$15,729	$19,638
MSA*	$11,625	$22,117	$27,436
United States	$10,030	$19,142	$23,196

Minneapolis-St. Paul Metropolitan Statistical Area consists of the following counties: in Minnesota; Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Washington, and Wright; and in Wisconsin; St. Croix.

Source: Regional Economic Information System 1969-95, Bureau of Economic Analysis, Economics and Statistics Administration, U.S. Department of Commerce, August 1997.

Transportation/Access

The Lower St. Croix National Scenic River is accessible by a well-developed federal, state, and local highway and road system. Interstates 35 and 94 bring travelers from the east and west, and north and south, respectively, to the Minneapolis-St. Paul region. U.S. Routes 8, 10, 12, and Minnesota Routes 96 and 97 are the other primary east-west routes through the Lower St. Croix River region. U.S. Routes 61 and 63, and Minnesota Routes 35 and 95, and Wisconsin Route 65 also provide north-south access to the area. Many local roads throughout the watershed provide immediate access to the national scenic riverway for recreational users.

All of the scenic river is within a ½ to 1-hour drive time of the Minneapolis-St. Paul metropolitan area. The development of modern highways, the creation of flexible work schedules and three-day weekends, people's higher disposable incomes, and an increased desire of people to *get away from it all*, even for short periods of time, have all combined to place the Lower St. Croix National Scenic River within easy reach of more than 2.5 million people.

TABLE 27: LOWER ST. CROIX NATIONAL SCENIC RIVERWAY
UNEMPLOYMENT AND POVERTY (1990 AND 1994)

State/County Other	Percentage of Labor Force Unemployed (1990)	Percentage of Labor Force Unemployed (1994)	Percentage of Population Below the Poverty Level (1990)	Percentage of Population Below the Poverty Level (1994)
Minnesota	5.1%	4.0%	10.2%	10.8%
Chisago	7.0%	5.5%	7.8%	8.1%
Washington	3.9%	3.0%	4.4%	4.8%
Wisconsin	5.2%	4.7%	10.7%	10.9%
Polk	6.7%	5.3%	11.8%	11.8%
St. Croix	4.1%	3.9%	6.4%	6.0%
Pierce	5.3%	4.2%	10.4%	8.1%
MSA *	4.6%	NA	8.1%	NA
United States	6.4%	6.1%	13.1%	15.1%

Minneapolis-St. Paul Metropolitan Statistical Area consists of the following counties: in Minnesota; Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Washington, and Wright; and in Wisconsin; St. Croix, and Pierce.

NA = not available

Source: Census of Population and Housing, 1990: Summary Tape File 3 on CD-ROM (Minnesota and Wisconsin) [machine-readable data files] / prepared by the Bureau of the Census. Washington: The Bureau [producer and distributor], 1992; and

U.S. Census Bureau; "Estimated Number and Percent People of All Ages in Poverty by State: US 1993;" published January 1998; <http://www.census.gov/cgi-bin/hhes/saipe93/gettable.pl>, and U.S. Census Bureau; "USA Counties 1996, General Profile;" 1996;<http://www.census.gov/stab/USA96/ / .txt>

Tourism

Tourism is an important economic factor in the St. Croix Valley. The historic character of many of the valley's communities, as well as the scenic character of the valley itself, has been emphasized by organizations promoting the valley as a regional tourist destination. The majority of tourism visits arrive in the valley by car and visit such destinations as downtown Stillwater, Hudson, Prescott, Marine on St. Croix, Osceola, and Taylors Falls/St. Croix Falls. Many summer tourism visits, however, arrive by boat from the Mississippi; vacationing boaters from places like La Crosse and even such distant places as the Quad Cities and St. Louis are attracted to the riverway's amenities.

Land Values

There are about 3,000 private landowners within the riverway boundary and many more in close proximity to the river. The valley's scenic character and its recreational values make it attractive for up-scale residential development, making the St. Croix Valley a status address for many of the Twin Cities wealthiest residents. Residential land values are high and have continued to climb throughout the last 25 years.

OWNERSHIP

The National Wild and Scenic Rivers Act limits the total acreage within the riverway boundary to an average of no more than 320 acres of land per linear mile on both sides of the river (outside the river's ordinary high water mark). The riverway is 52 miles long and the boundary averages ¼ mile in width on each side of the river. Lands such as riverbeds and islands that lie between the river's ordinary high water mark on each side of the river are not included in the total acreage. Therefore, the total approximate acreage of the riverway is 25,346 acres.

While most of the land within the riverway boundary is in private ownership, there are also significant holdings by federal, state, and local governments. In addition, there are many parcels of land where federal or state agencies have purchased something less than fee title.

Federal Ownership

The Lower St. Croix Act limits National Park Service land acquisition activities to the 27 miles of river north of the north limits of Stillwater. In this area, the Park Service has acquired fee title to some land as well as less-than-fee-title (scenic easements and riverfront easements) to other parcels. The National Wild and Scenic Rivers Act limits federal fee title acquisition to an average of 100 acres per river mile outside the ordinary high water marks, which in the case of the Lower St. Croix translates to 2,700 acres. As provided for in federal law, eight sellers reserved a right of use and occupancy when they sold their property to the Park Service; these reservations are either for a fixed period or a life estate. Two of those reservations have expired and the last of the remaining six will expire in 2019. Within the ordinary high water marks north of Stillwater there are 2,610 acres of land that the Park Service can legally acquire; 2,003 acres have been acquired and 607 acres remain to be acquired.

Remaining lands north of Stillwater could be acquired by the Park Service in fee either through donation or willing seller. Scenic easements, which place limits on future private development, have been acquired on 3,102 acres. Riverfront easements are more restrictive and essentially prohibit development; they have been acquired by the Park Service on 393 acres. In both cases, these lands remain in private ownership and remain on the tax rolls.

Other than the remaining 607 acres within the river and some potential scenic easement purchases, the NPS land acquisition goals in the land acquisition plan have been met.

State Ownership

State ownership is far more limited than NPS ownership in the river valley. The states have acquired land within the five state parks along the river, as well as within Wisconsin Department of Natural Resources' St. Croix Islands Wildlife Area. There are some additional parcels of state ownership, most of them small. They include some highway waysides and a

Minnesota DNR-owned public water access site.

The 1976 *Master Plan* envisioned extensive state acquisition of scenic easements on rural private lands south of Stillwater as a backup to land use controls. Because land values are very high along the river, those scenic easements proved very expensive and both states abandoned their acquisition programs in favor of land use controls. State scenic easements were purchased on only a few hundred acres, primarily in the vicinity of Kinnickinnic and Afton State Parks.

Local Government Ownership

Many of the communities along the river own public parkland along the river, although these parcels are often fairly small. Larger holdings include Kolliner Park, which is owned by the city of Stillwater even though it is located in St. Croix County, Wis.; Lowell Park in Stillwater; Lakeside Park in Bayport; Ferry Landing Park in North Hudson; Lakefront Park in Hudson; public swimming beaches in Lakeland and Lake St. Croix Beach, and Steamboat Park in Afton. Larger holdings include Point Douglas County Park opposite Prescott, which is owned and managed by Washington County, and St. Croix Bluffs Regional Park in southern Washington County. St. Croix Bluffs was acquired by Washington County in 1997; it had previously been a private recreation area for employees of a Twin Cities-based corporation.

LAND USE MANAGEMENT

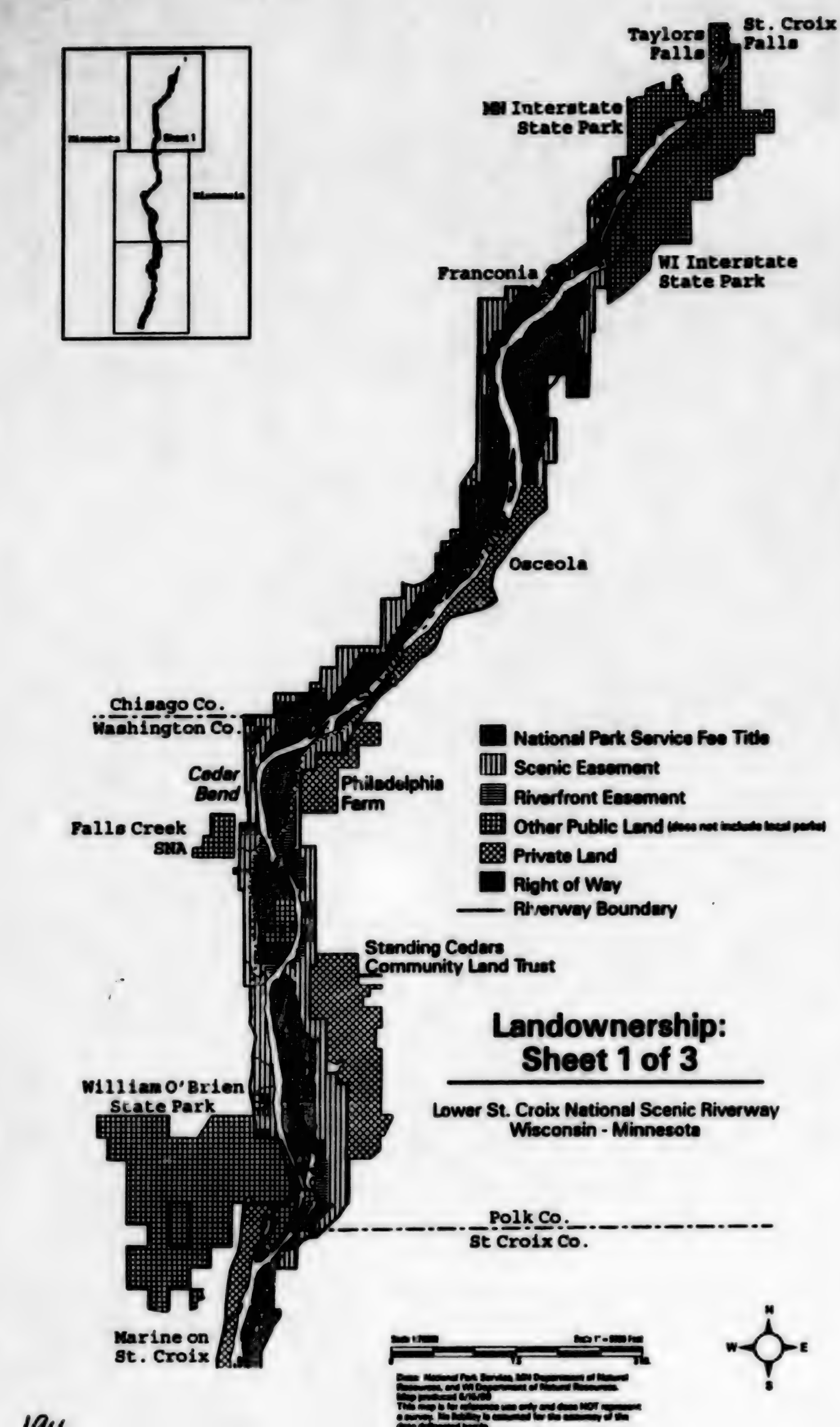
The 1976 *Master Plan* directed that the states develop land use regulations that local governments would adopt and enforce with state oversight. Guidelines for those state regulations were found in an appendix to that plan. Both states subsequently adopted state rules and all local governments adopted and have continued to enforce special zoning ordinances in the riverway. Local governments are required to notify the state of public hearings on zoning issues such as variances and conditional use permits, as well as adoption or amendment of the local riverway ordinance. Each state has authority to overrule a local zoning decision if the state concludes the decision is inconsistent with state rules for protection of the riverway.

WATER USE MANAGEMENT

The 1976 *Master Plan* recommended that the states develop water surface use regulations to control boating activity in busy sections of the river. Those state rules were subsequently adopted and have been in effect since 1977. The Lower St. Croix Management Commission developed density standards for consideration of additional boat speed restrictions, and the state rules have been amended several times consistent with those guidelines. On-water law enforcement is provided by the five county sheriff's departments, the two Departments of Natural Resources, and the National Park Service.

MANAGEMENT ORGANIZATION

The Lower St. Croix Management Commission establishes policy for cooperative management of the riverway. It consists of the two Departments of Natural Resources and the National Park Service, with the Minnesota-Wisconsin Boundary Area Commission serving as a nonvoting member. The boundary area commission also provides part-time staff services to the management commission. Coordination of day-to-day field management of the riverway is the responsibility of the management commission's technical committee; technical committee membership includes the same agencies represented on the management commission.



Landownership: Sheet 1 of 3

Lower St. Croix National Scenic Riverway
Wisconsin - Minnesota

Data: National Park Service, MN Department of Natural Resources, and WI Department of Natural Resources.
Map produced [illegible]
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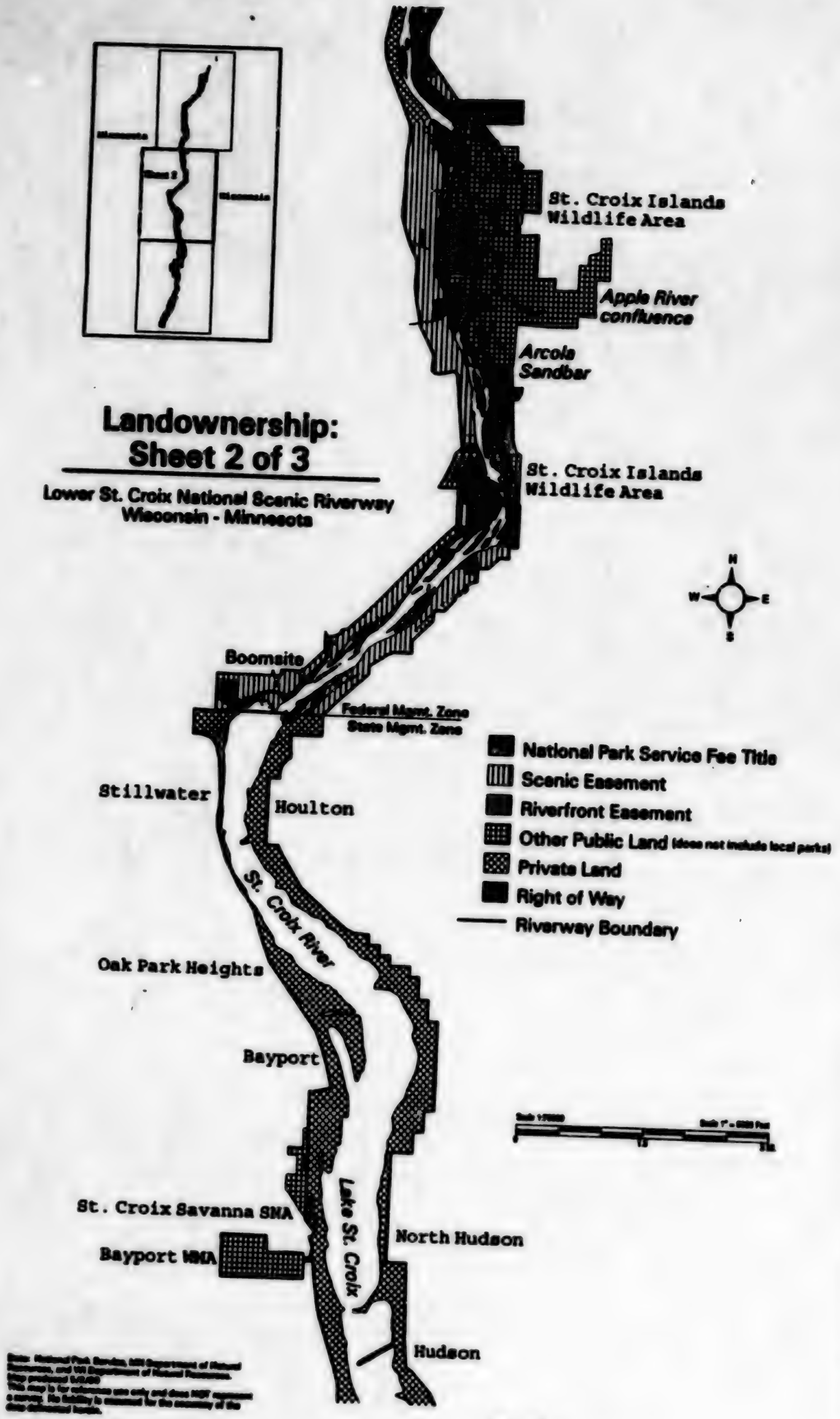
Landownership: Sheet 2 of 3

Lower St. Croix National Scenic Riverway
Wisconsin - Minnesota



Source: National Park Service, MN Department of Natural Resources, and WI Department of Natural Resources.
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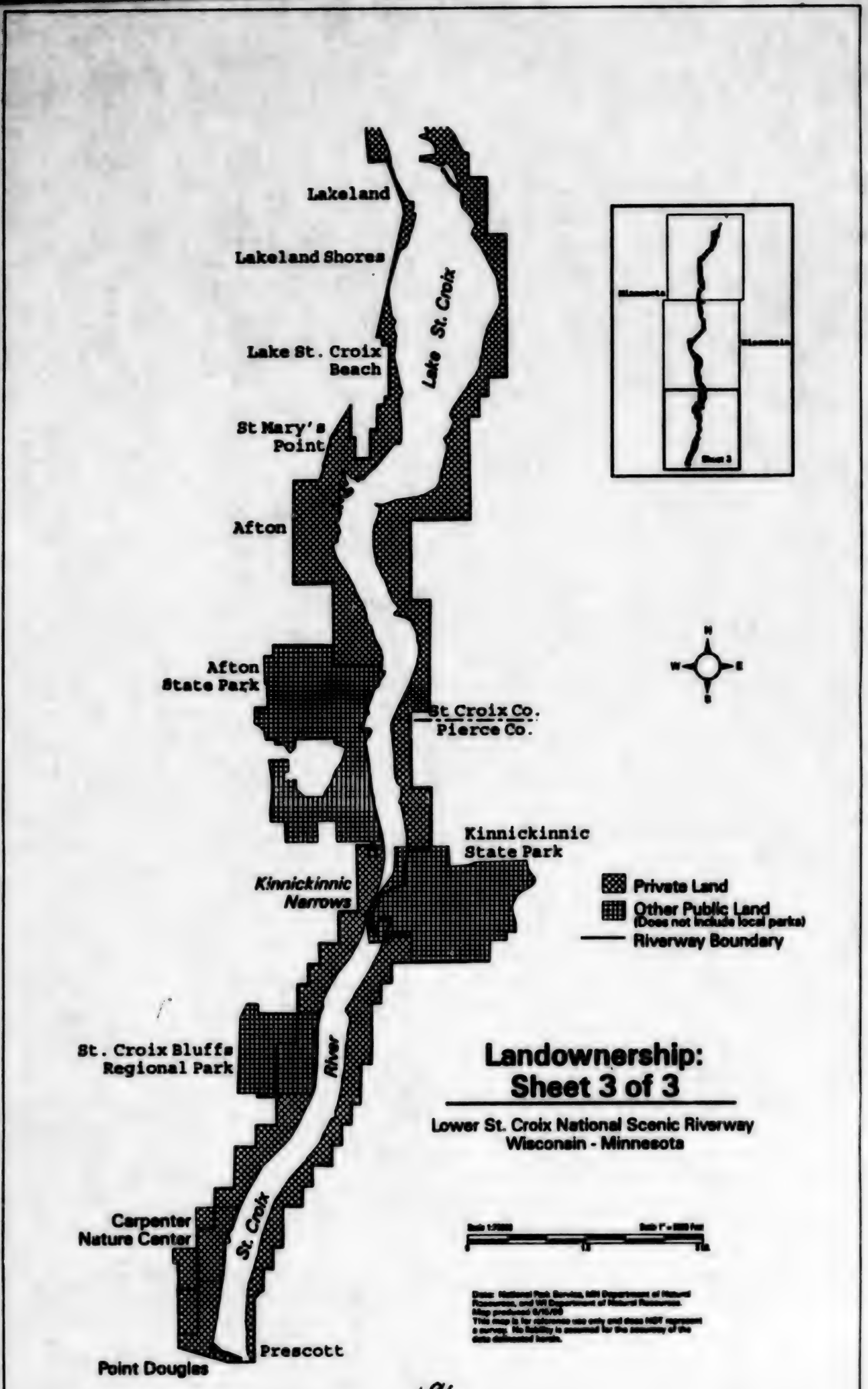

Landownership: Sheet 3 of 3

Lower St. Croix National Scenic Riverway
Wisconsin - Minnesota

Environmental Consequences

INTRODUCTION

The potential environmental effects of the five land use/water use management alternatives on scenic resources, recreational use, natural resources, cultural resources, socioeconomic resources and land and water management are examined in this chapter. These effects provide a basis for comparing the advantages and disadvantages of the alternatives.

The impacts of the five management structure options are presented separately at the end of this chapter. The impacts of these options are related to land and water management and to costs, and are independent of the land use/water use management alternatives.

Because of the conceptual nature of the alternatives, their potential consequences can be addressed only in general terms. The conclusions presented here are based on the review of information provided by other agencies and the insights of the National Park Service and Minnesota and Wisconsin Department of Natural Resources staff who are familiar with the lower riverway. If and when specific developments or other actions are proposed as a result of this *Cooperative Management Plan*, the staff of the managing agencies would determine whether or not more detailed environmental documents need to be prepared, consistent with provisions of the National Environmental Policy Act and comparable state laws.

It is important to note that this analysis only applies to actions being proposed by the National Park Service and the Minnesota and Wisconsin Departments of Natural Resources. Many other governmental organizations and individuals own land within the lower riverway boundary and take actions that affect the riverway's resources and users. Also, the consequences of the proposed state guidelines for land use and water-based recreational use regulations in appendixes A and B are *not* assessed — these proposed guidelines would be approved and implemented through the states' separate rule-making process.

Developments and actions are also being taken in the watershed, outside the lower riverway, which affect the river. The National Park Service and the Minnesota and Wisconsin Departments of Natural Resources have little or no control over many of these actions, although they would work with businesses, landowners, local governments, and others to minimize any impacts on the lower riverway. Consequently, this environmental impact statement does not assess the impacts of other organizations' actions in or outside the riverway, except briefly under the "Cumulative Effects" section.

To focus the discussion of the potential consequences of the alternatives, specific impact topics were identified. These topics were based on the riverway's outstandingly remarkable values, federal laws, regulations and orders, agency management policies, the planning team's knowledge of scarce or easily impacted resources, and issues and concerns expressed by the public and other agencies during scoping (see the issues section in the "Introduction" and the "Consultation and Coordination" chapters). Other topics were dismissed from further consideration. The rationale for dropping these topics is discussed below.

IMPACT TOPICS DISMISSED FROM FURTHER CONSIDERATION

Under NPS policies and the Council on Environmental Quality regulations, a number of impact topics must be assessed in environmental impact statements. However, in the case of the Lower St. Croix several of these topics are irrelevant and can be dismissed. Other topics were dismissed because they were not important for the lower riverway, or because the alternatives would not affect the topics, or the alternatives would not have discernible impacts on the topics.

Prime and Unique Agricultural Lands

As noted in the "Affected Environment," there are prime and unique agricultural lands within the boundary of the lower riverway. However, none of the alternatives being considered would propose developments or other uses that would affect these lands. Thus, there is no need to assess the impacts of the alternatives on this topic.

Sacred Sites

There are no known sacred sites in the lower riverway.

Indian Trust Resources

All of the alternatives recognize the Chippewa Indian tribal treaty rights to hunt, fish, and gather resources on lands along the St. Croix north of Cedar Bend. Thus, Indian trust resources would not be affected.

Natural or Depletable Resource Requirements and Conservation Potential

Resource extraction activities are ongoing in the lower riverway but the alternatives are not proposing any such activities. Consequently, there is no need to assess resource requirements and conservation potential.

Energy Requirements and Conservation Potential

None of the alternatives would encourage a substantial increase in energy use or would propose new activities or major facilities in which energy conservation would need to be considered.

Mussels

The St. Croix River supports a highly diverse mussel population. Potential impacts to listed mussel species are discussed under the "threatened and endangered species" impact topic. Similar types of impacts to other mussel species would be expected. Management that benefits the federally listed Higgins eye pearly mussel should also effectively protect mussel communities in general because the Higgins eye is found throughout the riverway. (However, management that specifically benefits the winged maple leaf mussel might not benefit other mussel species in the rest of the riverway, since the winged maple leaf is found only in a small area.) A separate impact topic for mussels has not been included (see the threatened and endangered species impact topic).

Wetlands and Floodplains

No actions or new developments are being proposed by the management agencies in any of the alternatives that would adversely affect either wetlands or the lower St. Croix floodplain. (New access points could be permitted in one of the alternatives, but the NPS floodplain guidelines — Special Directive 93-4 — do not apply to this water-dependent development.) In addition, both states have regulations that cover new developments on floodplains.

Climate/Air Quality/Physiography/Topography/Geology

These resources were dismissed as impact topics because they would not be affected by actions or developments under any of the alternatives. The climate or overall physiography or topography of the riverway would not be altered. Air quality would continue to be monitored for air pollution impacts. Geologic resources are one of the three "outstandingly remarkable values" for which the riverway was designated. The record shows that the geologic resources of greatest interest to Congress at the time of designation are the basalt outcrops and evidence of the actions of glacial meltwater in the Dalles of the St. Croix. These features are contained within the two state parks in that portion of the riverway and will receive the same high level of protection under all alternatives.

Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

For the purpose of fulfilling Executive Order 12898, in the context of NEPA, the alternatives addressed in this plan were assessed during the planning process. It was determined that none of these alternatives would result in significant direct or indirect negative or adverse effects on any minority or low-income population or community.

METHODOLOGY

The impacts on scenic, natural, and cultural resources, recreational use, and socioeconomic conditions were generated based on existing conditions, current regulations, and likely development trends. The action alternatives were compared to the no action alternative to determine the degree of impact. Experience and professional judgment also contributed to the analysis and evaluation as well as the park's purpose, significance, and exceptional resources and values. In some cases, a major negative impact on one resource may prove to be a positive benefit to another.

The effects were evaluated with the following levels of impact in mind:

- Negligible — The impact is so slight as to be difficult to measure or perceive, and has no meaningful implications.
- Minor — The impact is small, not always obvious, but is detectable and measurable.
- Moderate — The impact is readily apparent.
- Major — The impact is severely adverse or exceptionally beneficial.

IMPACTS ON SCENIC RESOURCES

Analysis

Scenic resources in the riverway are protected primarily through land acquisition or through regulatory controls on land development. No significant land acquisition would occur in implementing the preferred alternative. The proposed five land management categories, compared to the current two categories, would provide additional scenic resource protection in rural areas with slightly less protection within municipalities (where scenic values have already been heavily altered). Under the no-action alternative, scenic values would continue to be protected by development standards designed to limit visual impacts. However, under the preferred alternative, the riverway managing agencies would require local governments to protect the historic character of municipalities, which would reduce potential impacts to scenic values in municipalities from new development. The no-action alternative would take no such special actions.

The following analysis evaluates scenic impacts created by the application of the five land management areas on each river segment.

The Dalles of the St. Croix to Rock Island: 3.5 miles. Scenic resources within the two state parks in this river segment would continue to be protected by state ownership (as they would be under the no-action alternative). No impact to scenic resources would occur because any future development would occur at existing development nodes, and scenic and relatively undisturbed natural areas would be maintained. Private lands in Minnesota in the southern portion of this segment would be classified as conservation and would receive increased protection (i.e., more restrictive state land use regulations) as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Osceola Area (Rock Island to McLeod Slough): 10 miles. Osceola is classified as small town historic, which affords about the same level of scenic protection as the existing urban standard, which does not preclude new development visible from the river but limits the development's visibility and visual impacts. However, protection of historic character would be required, further reducing potential scenic impacts. Most of this segment would be classified as conservation and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Marine Area (McLeod Slough to Arcola Sandbar via Page's Slough): 8.5 miles. Marine on St. Croix itself is classified partly as rural residential and mostly as small town historic, which affords about the same level of scenic protection as the existing urban standard. However,

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protection of historic character would be required in most the area, reducing potential scenic impacts. William O'Brien State Park would receive the same high level of scenic resource protection as compared to the no-action alternative. Most of the remainder of this segment in Minnesota would be classified as rural residential, providing a level of protection similar to the no-action alternative, which would further limit visibility of development and maintains the rural character in unincorporated areas. The Wisconsin side of the river would be classified conservation and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Rice Lake Flats (Dead Man's Slough to Arcola Sandbar via St. Croix Islands Wildlife Area): 2.5 miles. St. Croix Islands Wildlife Area would receive the same high level of scenic resource protection as compared to the no-action alternative, which would maintain the undisturbed natural appearance. The remainder of this segment would be classified conservation and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Arcola Gorge (Arcola Sandbar to Head of Lake St. Croix): 5 miles. The Minnesota side of the river in this segment would be classified as rural residential, which affords a level of protection very similar to the no-action alternative. The Wisconsin side of the river would mostly be classified as rural residential , which would afford a level of protection similar to the no-action alternative.

Urban Stillwater (Head of Lake St. Croix to Stillwater Downtown Courtesy Docks): 2 miles. The northern portion of this segment in Minnesota is not intensively developed; it would be classified as small town, which would give it a level of scenic protection similar to the current urban classification. The southern portion of this segment includes the heavily developed downtown Stillwater area; it would be classified as river town, which would provide slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however, impacts on scenic resources would be negligible. In addition, the preferred alternative would require protection of historic character that would reduce potential scenic impacts.

The Wisconsin side would be classified as rural residential, which would afford a level of protection similar to the no-action alternative.

South Stillwater-Bayport Area (Stillwater Downtown Courtesy Docks to Andersen Point): 3 miles. Most of this segment in Minnesota would be classified as river town, which provides slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however,

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impacts on scenic resources would be negligible. In addition, the preferred alternative would require protection of historic character that would reduce potential scenic impacts. The Andersen Point area would be classified as small town, with the result that its level of scenic protection would be similar to the current urban classification. The Wisconsin side would be classified as rural residential, which affords a level of protection very similar to the no-action alternative.

Bayport-North Hudson Area (Andersen Point to Willow River Dam): 2 miles. In Minnesota, the area between Andersen Point and the south limits of Bayport would be classified as small town, which would result in a level of scenic protection similar to the current urban classification. The southern portion of this segment in Minnesota would be classified as rural residential, which affords a level of protection similar to the no-action alternative. Most of the Wisconsin side would be classified as rural residential, which affords a level of protection similar to the no-action alternative. The southern portion of this segment in Wisconsin lies in North Hudson and would be classified as small town, which would result in a level of scenic protection similar to the current urban classification.

Urban Hudson (Willow River Dam to Interstate 94): 2 miles. The Minnesota side in this segment would be primarily classified as small town, which would result in a level of scenic protection similar to the current urban classification. The Wisconsin side north of Orange Street would be classified as small town, which would result in a level of scenic protection similar to the current urban classification. The area south of Orange Street would be classified as river town, which would provide slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however, impacts on scenic resources would be negligible. In addition, the preferred alternative would require protection of historic character that would reduce potential scenic impacts.

Open Lake (Interstate 94 to Catfish Bar): 4.5 miles. The Minnesota side in this segment would be classified as small town, with the result that its level of scenic protection would be similar to the current urban classification. The southern portion of Hudson would be classified partly as river town and partly as small town. The remainder of this segment in Wisconsin would be classified as rural residential, which would afford a level of protection similar to the no-action alternative.

Catfish to Kinnickinnic (Catfish Bar to Kinnickinnic Narrows): 5 miles. In Minnesota, the old Afton village area would be classified as small town historic, and the residential area to the south would be classified as small town, with the result that its level of scenic protection would be similar to the current urban classification. The southern portion of Afton and the area south of Afton State Park, as well as all of the Wisconsin side, would be classified as rural residential, which would afford a level of protection similar to the no-action alternative. Afton State Park would receive the same high level of scenic resource protection as the no-action alternative.

Kinnickinnic Narrows: 0.5 miles. The Minnesota side of the river in this segment would be classified as rural residential, which affords a level of protection similar to the no-action alternative. Kinnickinnic

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State Park in Wisconsin would receive the same high level of scenic resource protection as the no-action alternative.

Kinnickinnic to Prescott (Kinnickinnic Narrows to Mississippi Confluence at Prescott): 6 miles. Much of the Minnesota side of the river in this segment would be classified as rural residential, which affords a level of protection very similar to the no-action alternative. St. Croix Bluffs Regional Park would receive the same high level of scenic resource protection as compared to the no-action alternative. Carpenter Nature Center would be classified as conservation and would receive increased protection as compared to the rural classification under the no-action alternative. In Wisconsin, the area north of Prescott would be classified as rural residential, which would afford a level of protection similar to the no-action alternative. Prescott would be classified as river town, which provides slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however, impacts on scenic resources would be negligible.

In addition to the application of land management areas to segments of the riverway, encouraging the maintenance and restoration of the natural diversity and ecological integrity of significant plant communities on public and private lands would result in the visual landscape of the riverway becoming more representative of the native acuteness of the area. These voluntary provisions could have a long-term beneficial impact on the visual resources of the riverway by aiding in the perpetuation of a natural mosaic of indigenous vegetation. However, these impacts would be minor to negligible because these actions would be voluntary, and most individuals would consider these areas as natural landscapes whether or not the vegetative mosaics included a diversity of significant plant communities.

A change in forest tax law programs in Wisconsin would be pursued, which would enable landowners within the riverway to develop a forest management plan that would allow vegetation to be removed in a manner that would protect the scenic quality of the river. This change in policy for Wisconsin would result in a long-term, minor beneficial impact on the scenic resources of the riverway by providing landowners with more flexibility to preserve these resources.

Continued adherence to NPS policies that perpetuate native plant communities would result in a long-term, minor, beneficial impact on the scenic resources of the riverway. Under the current management approach (no-action), allowed changes in the scale or character of bridge crossings and relocation of transmission lines to new crossing corridors could potentially have a major long-term effects on scenic resources. The preferred alternative would restrict numbers and scale and encourage multiple uses of river crossing corridors and structures (including the consolidation of utility crossings). Replacement of similar-scale bridges or of larger-scale bridges would be allowed as long as there would be no adverse effects on the riverway. Compared to the no-action alternative, the preferred alternative would avoid potentially major long-term impacts to scenic quality from construction of large-scale bridge crossings or relocation of transmission lines to highly scenic or largely undisturbed corridors.

Flexibility on the use of submarine crossings could allow for accommodation of infrastructure needs for the surrounding communities while minimizing impacts on the riverway. Provisions could include the relocation, expansion in size or the number of lines, or the addition of new crossings. These actions could result in negligible adverse impacts on scenic resources in the immediate vicinity because new crossings would only be permitted provided there were no visual impacts. Potential impacts from accommodation of the utility needs could be reduced.

Prohibiting clearcutting for inspections of pipeline rights-of-way and maintaining as much natural vegetation as possible along utility rights-of-way would result in minor beneficial impacts on scenic resources.

Conclusion

Overall, the preferred alternative would have a minor, positive impact on scenic resources. Also, potentially major long-term impacts from changes to river crossings would be avoided.

IMPACTS ON RECREATIONAL USE

Analysis

The primary goal of the preferred alternative with respect to boating recreation would be to preserve the existing diversity of surface water recreational experiences. Like the no-action alternative, overall boating use of the riverway would continue to grow slowly, if at all (existing use patterns show no clear increase in use since the mid-1980s). The diversity of boating opportunities would remain, with the exception of extremely high-speed boating activities. Boaters interested in that activity would be displaced to another resource. Impacts for each river segment are described below.

Backwaters from the Dalles of the St. Croix to north limits of Stillwater: 5 miles. The natural waters classification for this segment would be identical to the existing no-wake designation; the impact of the preferred alternative would be the same as the no-action alternative, which would be to maintain the quiet and little-used character of the recreational experience.

Dalles of the St. Croix to Rock Island: 3.5 miles. The quiet waters classification for this segment would be identical to the existing slow-speed zone designation. The impact of the preferred alternative would be the same as the no-action alternative, which would be to maintain the slow speeds, low noise levels, and the more social experience associated with relatively large numbers of canoers.

Rock Island to McLeod's Slough: 10 miles. The quiet waters classification for this segment would be identical to the existing slow-speed zone designation; the impact of the preferred alternative would be the same as the no-action alternative. Thus, recreational use would be similar to the preceding river segment, although less social interaction would likely occur below the landing at Osceola where many rental canoe trips would continue to end.

McLeod's Slough to Arcola Sandbar: 8.5 miles. The quiet waters classification for this segment would be identical to the existing slow-speed zone designation; the impact of the preferred alternative would be the same as the no-action alternative.

Opportunities would be maintained for a mixture of nonmotorized and slow-moving motorized craft.

Arcola Sandbar to north limits of Stillwater: 5 miles. The moderate recreation classification for this segment would involve a speed limit and elimination of waterskiing. This is slightly different that the current rule, which involves no speed limit but a firm restriction on summer weekend waterskiing. Congestion in this narrow area has become a concern and the imposition of a speed limit would be considered a positive impact on congestion and shoreline erosion concerns.

Stillwater to Catfish Bar: 13.5 miles. The active social recreation classification for this segment would involve a speed limit; under the no-action alternative there would be no speed limit. The existing no-wake zones in the Hudson area would remain under the preferred alternative. There has been growing concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment. This would be eliminated under the preferred alternative, forcing boaters who want to travel at those speeds to use a different resource. The imposition of a speed limit in this area would be considered a minor positive impact on the environment.

Catfish Bar to Prescott: 11.5 miles. The active social recreation classification for this segment would involve a speed limit; under the no-action alternative there would be no speed limit. The no-wake zones in the Catfish Bar and Kinnickinnic State Park areas would remain under the preferred alternative. There has been growing concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment; this would be eliminated under the preferred alternative, forcing boaters who want to travel at those speeds to use a different resource. The imposition of a speed limit in this area would be considered a minor positive impact on the environment.

Camping Experience. A camping management plan would be developed for boat-related camping north of Stillwater that would impose gradually increased restrictions on camping. This would result in fewer boat-in campsites than currently exist, enhancing privacy and reducing shoreline erosion and visual impacts from trampled vegetation and exposed soils. However the opportunity for more social camping would be reduced, which would displace some campers to another resource. At Hudson, campers without on-board toilets would be displaced. The outcome would be reduced shoreline erosion between the Arcola sandbar and Stillwater and reduced water quality problems there and at Hudson, but an increase in displaced recreational users.

Conclusion

Overall, the preferred alternative would provide minor, possibly negligible, positive impacts on recreational use. However, a few riverway users, those seeking to travel at high speeds and some island campers, would be displaced.

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IMPACTS ON NATURAL RESOURCES

Water Quality

Analysis. Overall boating totals would not likely change under the preferred alternative, so water quality impacts from petroleum products or day-use boaters who don't use proper toilet facilities would be about the same as the no-action alternative. Additional restrictions on camping north of Stillwater and at Hudson would have a slight positive impact on water quality as compared to the no-action alternative. There would be a slight decrease in total residential development in areas not served by public sewer, leading to slightly less risk of water quality impacts from failed on-site waste treatment systems.

Possible bridge replacements could have short-term, adverse effects on water quality during construction, however, mitigation measures would likely minimize these impacts.

Conclusion. Water quality impacts from the discharge of motorboat petroleum products or day-use boaters who do not use proper toilet facilities would continue but would not likely increase because overall boating totals would not be expected to change. Additional restrictions on camping north of Stillwater and at Hudson would have a slight positive impact on water quality. Some short-term impacts also could occur during construction of bridge replacements.

From a riverwide perspective, it is expected that pollution due to the construction of development would be short term, while pollution due to users would be transient and should have minor to negligible effects on pollutant levels.

Soils

Analysis. As under the no-action alternative, additional development could occur, including residential development in rural areas. Consequently, some soils would still be lost to development, although new soil disturbance would likely be reduced in the park, natural, and minimally disturbed management areas (43% of the lower riverway) where less development and more restrictive land use regulations would be employed.

Shoreline erosion caused by boat wakes would be similar to the no-action alternative. The imposition of speed limits from the Arcola sandbar south would have a negligible impact on shoreline erosion caused by boat wakes. The area between the Arcola sandbar and Stillwater is the focus of much concern about wake-induced shoreline erosion, and a moderate speed limit there would likely do little to alter current impacts.

Shoreline erosion, soil compaction, and the formation of social trails from campers would be slightly reduced, as compared to the no-action alternative, by limitations and overall reductions in camping north of Stillwater. Localized bluff erosion from foot trails would be about the same as the no-action alternative.

Only a few areas would be affected by bridge and utility line replacements during the life of this plan. It is expected that mitigation measures would keep impacts localized and minor to moderate in magnitude. (Additional environmental documentation, with mitigation measures, would be required before these crossings would be approved.) Because bridge and utility line replacements would only be permitted in existing corridors, additional soil disturbance would be limited to areas that likely have already been altered.

If the Army Corps of Engineers needed to do some dredging at the Kinnickinnic Narrows, this alternative would reduce the amount of dredged material that would need to be removed and disposed. If the dredged material could be reused for other purposes, soil in the riverway or nearby would not be altered by the disposal of the material. (The 1997 *Channel Maintenance Management Plan* directs that dredged material from the Kinnickinnic Narrows be placed on the delta at Kinnickinnic State park for beach nourishment.)

Conclusion. Under the preferred alternative shoreline and bluff erosion would continue from recreational use but would be less. This would have negligible to minor long-term positive impacts on soils in localized areas, particularly on riverbanks and the islands. Additional soil loss and disturbance would be expected from new development on some private lands. However, the land use management area allocation would be beneficial, minimizing potential soil disturbance and loss on a large portion of the riverway. From an overall riverway perspective, compared to current conditions, the preferred alternative would likely have a negligible to minor positive impact.

Vegetation

Analysis. Special protection would provide maintenance and restoration of significant plant communities on federal and state lands and would encourage private and local government landowners to maintain and restore these communities. This beneficial effect would help maintain the riverway's diverse plant communities.

As in all of the action alternatives, the Wisconsin Department of Natural Resources would pursue a rule amendment that would allow landowners to harvest trees in a manner that would protect the scenic quality of the river. Many landowners might alter vegetative cover on their land, but with agency oversight it is expected to have a minor positive effect on the riverway's vegetation.

Application of the land use management areas along the riverway would have a positive effect on the riverway's vegetation. Some vegetation would still be lost to new development, but in the park, natural, and minimally disturbed management areas (43% of the riverway) less vegetation would be lost because of new development.

Bridge and utility line replacements would have a minor effect during the life of this plan. Because bridge and utility line replacements would only be permitted in existing corridors, little additional vegetation would be lost or disturbed. Mitigation measures are expected to localize and keep impacts minor to moderate in magnitude. New submarine crossings could disturb and alter vegetation near riverbanks where the transmission lines/pipelines go underground. (Additional environmental documentation, with mitigation measures, would be required before these crossings would be approved.)

If the Army Corps of Engineers needed to do some dredging at the Kinnickinnic Narrows, this alternative would reduce the amount of dredged material that would need to be removed and disposed. If the dredged material could be reused for other purposes, vegetation in the riverway or nearby would not be altered by the disposal of the dredged material.

Motorboat use on the lower St. Croix is believed to be affecting shoreline vegetation, with boat wakes damaging plants, exposing root systems, and undercutting trees. This impact would likely continue similar to the no-action alternative. The imposition of moderate speed limits from the Arcola sandbar south would likely have a negligible positive impact on shoreline erosion.

Users would continue to trample vegetation in localized areas when they picnic on the shoreline and islands and camp on the islands south of Stillwater (i.e., the Hudson islands). Some users probably would continue to damage trees, stripping bark from birch trees, cutting saplings, and pulling down branches for firewood. Disturbance of soils also would increase the likelihood of exotic plants like spotted knapweed and purple loosestrife becoming established. With overall use levels not expected to increase greatly on the lower riverway, alteration and loss of vegetation would likely continue similar to the no-action alternative.

On the other hand, limiting camping in areas north of Stillwater to certain zones, possibly to designated campsites, also should reduce the loss of vegetation and encourage native plants to become re-established (although even with efforts to prevent this impact, some trampling of vegetation would likely still occur due to day users and campers).

Conclusion. The preferred alternative would have both negative and beneficial effects on the riverway's vegetation. Vegetative communities would continue to be altered and lost due to the activities of users and new developments in the riverway. If new bridge replacements and/or utility crossings were built, there could be some minor impacts on vegetation. On the other hand, the application of the management areas in this alternative would have a beneficial effect, helping prevent the loss or disturbance of vegetation on a large portion of the lower riverway. Efforts to maintain and restore significant plant communities on public and private lands would also have a positive effect. Restrictions on camping would reduce impacts to vegetation. From a riverwide perspective, most of the riverway's vegetation would not be affected by users, new developments, or the management agencies. However, compared to the no action alternative, the preferred alternative would be expected to have a negligible to minor, long-term, positive impact on the riverway's vegetation.

Fish and Wildlife

Analysis. Impacts on wildlife would be similar to the no-action alternative. Most of the lower riverway management actions in this alternative would continue to promote the protection of fish and wildlife populations and habitats. No actions would be taken that would adversely affect areas known to be of special importance for breeding, nesting, foraging, or wintering.

However, rural home development would create patches that disrupt the movement of some wildlife, especially those most sensitive to human activity. There would be slightly less new rural home development under the preferred alternative as compared to the no-action alternative, but the differences in terms of wildlife impacts would not be measurable, especially considering much of the rural home development that could occur in the riverway has already been built.

Many of the lower riverway's wildlife populations and habitats have already been affected in varying degrees by recreational users and nearby developments. Some individual animals might be disturbed or temporarily displaced by the sounds of motorboats and groups floating down the river, but this is not expected to substantially affect the lower riverway's fish and wildlife populations.

Conclusion. Impacts on fish and wildlife populations would be expected to be negligible to minor.

Threatened and Endangered Species

Analysis. Implementation of the preferred alternative would not significantly change the number of recreational boats using the river as compared to the no-action alternative. The potential for recreational impacts is not expected to change with the continued use of appropriate mitigation (e.g., keeping people away from bald eagle nests). Efforts to maintain and restore the diversity and ecological integrity of significant plant communities should help protect species like the Karner blue butterfly. Therefore, this alternative would not likely adversely affect threatened and endangered species (with the possible exception of certain mussel species). A slight reduction in new rural home development could decrease the potential for impacts to some threatened and endangered species.

Also, since this alternative would promote the maintenance and restoration of the natural diversity and ecological integrity of plant communities on federal and state lands and encourage private landowners to do likewise, species like the Karner blue butterfly could benefit.

There is the potential that the federally listed Higgins' eye and winged mapleleaf mussels could be adversely affected in the following ways: People could inadvertently introduce zebra mussels into the lower riverway; zebra mussels could be scraped off by boats in shallow waters or by beached boats; boats could increase shoreline erosion and sediments in the water (which could affect filter-feeding mussels); waders and swimmers could unknowingly collect mussels and use them for fishing or other purposes, and poachers could adversely affect the mussels.

Although these activities have occurred, or are occurring, on the lower St. Croix, it is not known what the effect, if any, has been on the Higgins' eye and winged mapleleaf mussel populations. Recreational uses are likely "taking" individual mussels, which might be adversely affecting these species. (Pers com, R. Ferrin, NPS and Dan Hornbach, Biology Dept., Macalester College, 11/5/98). The National Park Service consulted with the U.S. Fish and Wildlife Service regarding incidental take, which might be occurring either now or in the future.

Recommended changes on the navigation channel between Taylors Falls and the Arcola sandbar and at the Kinnickinnic Narrows would avoid potential impacts to mussels.

Measures to minimize impacts and recovery of mussels would include the following measures. Recovery of the winged mapleleaf mussel would include preservation of the sole known remnant population in the lower St. Croix River. Recovery of the Higgins' eye mussel would include preservation of the current populations and its essential habitat, which would include one site on the lower St. Croix near Hudson, Wisconsin and another essential habitat area in the river near Franconia. The cooperative management plan identifies the following goals, strategies, or actions in support of the protection and recovery of these species: protection and improvement of water quality, development of a public information/education program that includes mussels, development of means to improve mussel information/ coordination among various agencies, organizations, etc., continued enforcement of regulations prohibiting harvesting or taking of mussels, and implementation of the zebra mussel action plan (see "Management Directions Common to All Alternatives" section). The managing agencies would also implement their respective components of the U.S. Fish and Wildlife Service's recovery plans for the winged mapleleaf mussel and the Higgins' eye mussel. These components address a wide variety of tasks, including actions to minimize human disturbance and destruction to the federally listed mussels, such as quantification of the magnitude of potential threats (harvesting, swimming, wading, digging, small recreational watercraft, and commercial paddlewheel watercraft) and identification of specific geographic locations of greatest concern; posting of educational signs; conducting educational programs; and review of paddleboat operations to minimize boat operation impacts.

Conclusion. The uses, user levels, and developments in the preferred alternative would not likely adversely affect most federal and state listed species in the lower riverway (with adequate surveys, consultation with the U.S. Fish and Wildlife Service and state biologists, and the application of appropriate mitigation measures). There are indications that recreational activities already may be adversely affecting the federally endangered Higgins' eye and winged mapleleaf mussel population on the lower St. Croix. Formal consultations with the U.S. Fish and Wildlife Service was undertaken to determine what actions need to be taken to ensure the conservation of these species and their biological opinion is included in appendix D.

IMPACTS ON CULTURAL RESOURCES

Analysis

As under the no-action alternative, riverway management would ensure the protection of all significant cultural resources. These resources would be at low risk of adverse impacts resulting from recreational use or neglect, and restrictions on new development within the riverway would minimize impacts. Land uses, including new development, would be managed to maintain the river's visual qualities and the historic character of the river communities.

The preferred alternative would require local governments in the river town and small town historic districts to develop ordinances protecting historic structures and requiring new development to be consistent with the historic character of those communities. As a result, the preferred alternative would result in minor improvements in protection of cultural resources.

The development of specific management direction for historic resources and cultural landscapes would depend on the completion of the List of Classified Structures and the Cultural Landscape Inventory. Determinations of significance for the riverway's cultural resources, including cultural landscapes, would help guide appropriate management decisions. Management would work cooperatively with the Minnesota and Wisconsin State Historic Preservation Offices, local officials, and private preservation groups in developing protection strategies for those cultural resources adjacent to the river but outside the boundaries of the riverway. Effective preservation partnerships would help minimize impacts from new development.

The managing agencies would work closely with the Minnesota and Wisconsin state historic preservation offices, American Indian interests, and private landowners in developing preservation strategies for any cultural resources that could be affected by future development.

Conclusion

Similar to the no-action alternative, restricted development and maintaining the riverway's visual qualities would minimize impacts on archeological and historic resources. Additionally, the preferred alternative would result in minor improvements in protection of cultural resources in the river town and small town historic districts.

IMPACTS ON SOCIOECONOMIC ENVIRONMENT

Local Economy

Analysis. This alternative does not call for large expenditures by the Park Service or the states for the development of infrastructure, so there would be little direct economic impact. Application of the land management areas would not result in greatly different restrictions on new development for most areas within the riverway. Placement of most of the new land management categories would be similar to the existing incorporated and unincorporated classifications. Exceptions to this would be areas designated as minimally disturbed and natural where increased restrictions would likely occur (although development could still occur) and in towns where some restrictions would be reduced (but with historic structure protection). Consequently, limited additional negligible to minor impacts on the long-term property tax base of the local communities due to restrictions on new development would occur. Existing positive effects on local economy from expenditures from tourists and other recreationists would continue, but would not be appreciably changed by the preferred alternative.

Conclusion. Positive impacts to the local economy would be negligible to minor compared to the no-action alternative.

Tourism

Analysis. Tourism in the St. Croix Valley is partially linked to the area's historic character. In that context, the preferred alternative's emphasis on historic structure protection and enhancement of the historic character of valley communities would have a minor positive impact on tourism. Boating-related tourism would not change, so impacts would be negligible.

Conclusion. There would be some negligible to minor positive effects on tourism.

Land Values

Analysis. Land values would not be impacted by the preferred alternative. Local property values have probably been and would likely continue to be beneficially affected by the presence of the riverway as under the no-action alternative.

Conclusion. There would be no new impacts on land values.

Landownership/Landowners

Analysis. The preferred alternative proposes a modest increase in scenic easement acquisition by the two states; National Park Service acquisition is essentially complete and would not change. As a result, the preferred alternative would have negligible impact on land ownership.

In general, the preferred alternative could affect some landowners in a manner that would have a minor to moderate impact when compared to the no action alternative. For instance, preserving the scenic character of the riverway might mean that some landowners within the riverway's boundary might be constrained when they wanted to make certain improvements to their property.

There would be a minor to moderate beneficial impact for local landowners in some areas of the riverway due to a reduction in conflicts with recreational users, particularly in popular camping areas north of Stillwater. Local landowners would also likely benefit from a reduction in the periodic loud noise generated by higher boat speeds and reduced shoreline effects from wave action.

Conclusion. There would be negligible impacts on landownership. Some landowners would benefit from reduced restrictions on property improvements, although there would be constraints on new development to maintain historic character. Some

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landowners would be negatively affected by restrictions on new development or improvements in areas outside of towns. There would also be minor to moderate benefits to landowners from a reduction in conflicts and shoreline erosion associated with recreational use in some areas of the riverway.

CUMULATIVE EFFECTS

The entire viewshed of the riverway as seen from the river would not be encompassed within the riverway boundaries, therefore, visual encroachments outside the boundary have the potential to impact the scenic resources of the riverway. In the federal zone the high bluffs, the rural character, the predominance of protected areas along this section of the river, and the fact that the viewshed outside the boundary would be less than the state-administered zone would mean that the concerns would not be as great here as in the state-administered zone. In this zone more of the viewshed would be outside the riverway boundary, the area would have a series of benches visible from the river, there would be less high bluff areas, more of the area would be incorporated, and its proximity to the Minneapolis/St. Paul area would likely mean greater growth. For those areas within the viewshed, yet outside the riverway boundary, local zoning standards would be the primary methods of controlling scenic impacts on the riverway. Mitigating methodologies, such as the encouragement of the preservation and maintenance of mature vegetation, planting of additional vegetative buffering, the protection of cultural resources, and the prohibition of the construction of any more extremely visible towers within the viewshed, would be beneficial to the preservation of the riverway's scenic quality. Actions taken outside the riverway boundary could have negligible to major impacts on the scenic resources of the riverway, depending on the magnitude of change. Therefore, the cumulative effects of NPS/state actions on the scenic quality of the viewshed would be negligibly to moderately beneficial, depending on the magnitude of changes to the scenic resources outside the riverway boundary.

Land use changes in the riverway and watershed have had a cumulative effect on the riverway's water quality, flows, soils, vegetation, and wildlife in localized areas. As the region's population continued to grow, new development would likely occur near the riverway and in the communities along the river. Further habitat fragmentation of the surrounding watershed landscape would likely continue.

The entire historical distribution of winged mapleleaf mussel has been significantly altered by human development in the Mississippi River basin, such as damming, dredging, channelization, agricultural application of fertilizers, pesticides, and herbicides, and municipal and industrial waste discharges. These developments are probably responsible for widespread and precipitous decline in mussel communities in general, and the extirpation or extinction of several species, although few studies have addressed directly the specific impact of any one of these factors.

Impacts from continued recreational use within the riverway and managing agency actions would contribute incrementally to impacts from the sources noted above.

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Overall, the land use management area allocation and special plant community protection would be beneficial, preventing loss of natural resources on a large portion of the riverway. This would be a positive, minor cumulative impact within the riverway and watershed.

None of the management actions are expected to add substantively to the cumulative effects on cultural resources. Growth and land use changes could affect cultural resources adjacent to or within the viewshed of the riverway. The cumulative effects of the management actions would help mitigate the effects of population growth and development.

Many communities and counties in Minnesota and Wisconsin are in the process of revising their comprehensive plans and related ordinances. Some of these revised plans and ordinances may include land use and development provisions applicable to the river corridor that would go beyond guidance provided in this document. Therefore, in some areas, cumulative impacts of land management measures may have negligible to moderate additional effects on certain property owners as compared to current conditions.

The economic and population growth in the region is expected to continue. The relatively small number of jobs and expenditures on management of the riverway would only have a minor effect on the expected growth of the total economy of the region. Therefore, there would be no appreciable socioeconomic cumulative impacts from the implementation of this alternative occurring in conjunction with the region's expected overall population and economic growth.

RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The proposed management area allocation, restrictions on island, shoreline, and boating use, along with the proposed inventory, monitoring, and research programs for the riverway would contribute to the long-term protection and preservation of resources and scenic character of the landscape. The maintenance and restoration of plant communities would also enhance long-term productivity of natural communities.

UNAVOIDABLE ADVERSE EFFECTS

Some minor adverse impacts to natural resources would occur. An adverse effect on some users, such as those seeking to boat at high speeds and some island campers, would also occur. To meet the scenic and resource protection purposes of the riverway, development restrictions on local landowners would be implemented. To meet the recreational purposes of the riverway, some conflicts between local landowners and recreational users would continue.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Some new residential and commercial development would likely continue to occur on private lands within the riverway boundary, particularly in the existing municipalities. Potentially, new river crossings might also occur. It is expected that this new development would result in the long-term localized loss of vegetation, soils, and wildlife habitat.

Any action that led to the loss of individual federally listed mussel species or their habitat would contribute to the loss of the species as an ecological and genetic resource. It is possible that the preferred alternative would contribute to their decline. However, it is expected that the implementation of actions outlined in the recovery plans for these species would avoid this situation and contribute to their conservation.

IMPACTS OF ALTERNATIVE A

IMPACTS ON SCENIC RESOURCES

Analysis

Scenic resources in the riverway are protected primarily through land acquisition or through regulatory controls on land development. No significant land acquisition would occur in implementing alternative A. The establishment of seven land management categories compared to two under the existing management program would provide additional scenic resource protection in rural areas, with slightly less protection within municipalities (where scenic values have already been heavily altered), as compared to the no-action alternative. Also under this alternative, the riverway managing agencies would require local governments to protect the historic character of municipalities, which would reduce potential impacts to scenic values in municipalities from new development. The no-action alternative would take no such special actions. Alternative A differs from the preferred alternative in that a greater portion of the riverway would be included in the river town, small town, and small town historic districts, essentially reducing scenic resource protection when considering the riverway as a whole.

The following analysis evaluates scenic impacts created by the application of the seven land management areas on each river segment.

The Dalles of the St. Croix to Rock Island: 3.5 miles. Scenic resources within the two state parks in this river segment would continue to be protected by state ownership (as they would be under the no-action alternative). No impact to scenic resources would occur because any future development would occur at existing development nodes, and scenic and relatively undisturbed natural areas would be maintained. Private lands in Minnesota in the southern portion of this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Osceola Area (Rock Island to McLeod Slough): 10 miles. Osceola itself is classified as small town historic, which affords about the same level of scenic protection as the existing urban standard, which does not preclude new development visible from the river but limits the development's visibility and visual impacts. However, protection of historic character would be required, further reducing potential scenic impacts. An area just north of Osceola would be classified as small town, providing for community growth along the riverway but allowing development that has more scenic impact than the existing rural classification. Most of this segment would be classified as natural, however, and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Marine Area (McLeod Slough to Arcola Sandbar via Page's Slough): 8.5 miles. Marine on St. Croix itself is classified mostly as small town historic, which affords about the same level of scenic protection as the existing urban standard, but with additional protection of historic character. William O'Brien State Park would receive the same high level of scenic resource protection as compared to the no-action alternative. Most of the remainder of this segment in Minnesota would be classified as rural residential, which affords a level of protection similar to the no-action alternative, which further limits visibility of development and maintains the rural character in unincorporated areas. The Wisconsin side of the river would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Rice Lake Flats (Dead Man's Slough to Arcola Sandbar via St. Croix Islands Wildlife Area): 2.5 miles. St. Croix Islands Wildlife Area is owned by Wisconsin DNR and would receive the same high level of scenic resource protection as compared to the no-action alternative, which would maintain the undisturbed natural appearance. The remainder of this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative.

Arcola Gorge (Arcola Sandbar to Head of Lake St. Croix): 5 miles. The Minnesota side of the river in this segment would be classified as rural residential, which affords a level of protection very similar to the no-action alternative. The Wisconsin side of the river would be classified partly as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would be less visible from the river. Consequently, they would have less impact on scenic resources than the no-action alternative. About the southern half of this segment in Wisconsin would be classified as rural residential, which affords a level of protection similar to the no-action alternative.

Urban Stillwater (Head of Lake St. Croix to Stillwater Downtown Courtesy Docks): 2 miles. The northern portion of this segment in Minnesota is not intensively developed; it would be classified as small town with the result that its level of scenic protection would be similar to the current urban classification. The central portion of this segment includes a relatively undeveloped area north of downtown Stillwater; it would be classified as river town, which provides slightly less scenic protection than the current urban classification and would accommodate downtown growth, while reducing scenic protection. The southern portion of this segment includes the heavily developed downtown Stillwater area; it would be classified as river town, which provides

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slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however, impacts on scenic resources would be negligible. In addition, alternative A would require protection of historic character that would reduce potential scenic impacts.

The Wisconsin side would be classified partly as rural residential, which would afford a level of protection similar to the no-action alternative, and partly as small town, which would provide significantly less scenic protection than the rural classification in the no-action alternative.

South Stillwater-Bayport Area (Stillwater Downtown Courtesy Docks to Andersen Point): 3 miles. Most of this segment in Minnesota would be classified as river town, which would provide slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however, impacts on scenic resources would be negligible. In addition, alternative A would require protection of historic character that would reduce potential scenic impacts. The Andersen Point area would be classified as small town, with the result that its level of scenic protection would be similar to the current urban classification. The Wisconsin side would be classified as rural residential, which would afford a level of protection similar to the no-action alternative.

Bayport-North Hudson Area (Andersen Point to Willow River Dam): 2 miles. In Minnesota, this area would be classified as small town, with a level of scenic protection similar to the current urban classification in a part of the area, but significantly less than the southern portion of this segment, which is classified as rural residential under the no-action alternative. Most of the Wisconsin side would be classified as rural residential, which would afford a level of protection similar to the no-action alternative. The southern portion of this segment in Wisconsin lies in North Hudson and would be classified as small town, with a level of scenic protection similar to the current urban classification.

Urban Hudson (Willow River Dam to Interstate 94): 2 miles. The Minnesota side in this segment would be classified as small town, with the result that its level of scenic protection would be similar to the current urban classification. The Wisconsin side would be classified as river town, which would provide slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however, impacts on scenic resources would be negligible. In addition, alternative A would require protection of historic character that would reduce potential scenic impacts.

Open Lake (Interstate 94 to Catfish Bar): 4.5 miles. The Minnesota side in this segment would be classified as small town, with the result that its level of scenic protection would be similar to the current urban classification. The southern portion of Hudson would also be classified as small town as would the St. Croix Cove area, which would be rural under the no-action alternative. The level of scenic resource protection in the St. Croix Cove area would be reduced. The remainder of this segment in Wisconsin would be classified as rural residential, which affords a level of protection similar to the no-action alternative.

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Catfish to Kinnickinnic (Catfish Bar to Kinnickinnic Narrows): 5 miles. In Minnesota the old Afton village area would be classified as small town historic, with the result that its level of scenic protection would be similar to the current urban classification, but with additional protection of historic character. The southern portion of Afton and the area south of Afton State Park, as well as all of the Wisconsin side, would be classified as rural residential, which affords a level of protection similar to the no-action alternative. Afton State Park would receive the same high level of scenic resource protection as compared to the no-action alternative.

Kinnickinnic Narrows: 0.5 miles. The Minnesota side of the river in this segment would be classified as rural residential, which affords a level of protection similar to the no-action alternative. Kinnickinnic State Park in Wisconsin would receive the same high level of scenic resource protection as compared to the no-action alternative.

Kinnickinnic to Prescott (Kinnickinnic Narrows to Mississippi Confluence at Prescott): 6 miles. Much of the Minnesota side of the river in this segment would be classified as rural residential, which affords a level of protection very similar to the no-action alternative. St. Croix Bluffs Regional Park would receive the same high level of scenic resource protection as provided under the no-action alternative. Carpenter Nature Center would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. In Wisconsin, most of the area north of Prescott would be classified as rural residential, which affords a level of protection similar to the no-action alternative. An area north of Prescott would be classified as small town to allow urban growth; this would result in significantly less scenic resource protection for that area than the current rural classification. Prescott would be classified as river town, which provides slightly less scenic protection than the current urban classification. Considering the heavily developed nature of the area, however, impacts on scenic resources would be negligible.

Provisions for vegetative management would be similar to the preferred alternative, except there would be no emphasis on voluntary actions or efforts to restore the natural diversity or ecological integrity of significant plant communities on private or state or local government lands. Also under this alternative more development could be expected; therefore, more plant communities would likely be affected. These actions would have an adverse impact on visual resources because there would be less of the natural mosaic of vegetation that is indigenous to the riverway. These impacts would be minor to moderate (depending on the amount of development) and long term because it could take years to restore vegetative patterns.

An amendment to the Wisconsin-managed forest law (Chapter NR 118) would be pursued, which would result in a long-term, minor, beneficial impact for the scenic resources of the riverway by providing landowners with more flexibility to preserve these resources.

Continued adherence to NPS policies that perpetuate native plant communities would result in a long-term, minor, beneficial impact to the scenic resources.

Alternative A would restrict the overall number and encourage multiple uses of existing river crossing corridors and structures. However, because this alternative allows for changes in the scale and character of or the relocation of road and railroad bridges, utility lines, and submarine lines, there could be negligible to major impacts on the scenic resources of the riverway, depending on the magnitude of the change. Allowance of new additional submarine crossings could result in minor to negligible adverse impacts on scenic resources in the immediate vicinity depending on the extent and duration of ground disturbance and vegetation removal during installation. By prohibiting clear-cutting for inspections of pipeline rights-of-way, there would be minor beneficial impacts to scenic resources.

Conclusion

Overall, alternative A would have a minor, negative impact on scenic resources compared to the no-action alternative. Also, potentially major long-term impacts from changes to river crossings could still occur.

IMPACTS ON RECREATIONAL USE

Analysis

Alternative A would allow recreational boating use levels to increase as long as resource impacts and safety concerns did not reach unacceptable levels. This increased use could alter the recreational experience, such as creating more crowded conditions at peak use times. Providing for a larger number of users would take precedence over maintaining a variety of recreational opportunities. The existing diversity of boating opportunities would be reduced somewhat. Some boaters would be displaced to other resources. These impacts are evaluated for the following river segments.

Backwaters from the Dalles of the St. Croix to William O'Brien State Park: 16 miles. The natural classification for this segment would be identical to the existing no-wake designation; the impact of alternative A would be the same as the no-action alternative, which would be to maintain the quiet and little-used character of the recreational experience.

Backwaters from William O'Brien State Park to Arcola Sandbar: 6 miles. The natural classification for this segment would be identical to the existing no-wake designation; the impact of alternative A would be the same as the no-action alternative, which would be to maintain the quiet and little-used character of the recreational experience.

Backwaters from Arcola Sandbar to north limits of Stillwater: 5 miles. The quiet waters classification for this segment would permit slow-speed boating, compared to the existing no-wake designation; the impact of alternative A would be to allow moderately faster boating than the no-action alternative.

Dalles of the St. Croix to Rock Island: 3.5 miles. The quiet waters classification for this segment would be identical to the existing slow speed zone designation. The impact of alternative A would be the same as the no-action alternative, which would be to maintain the slow speeds, low noise

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levels, and the more social experience associated with relatively large numbers of canoers.

Rock Island to McLeod's Slough: 10 miles. The quiet waters classification for this segment would be identical to the existing slow-speed zone designation; the impact of alternative A would be the same as the no-action alternative. Thus, recreational use would be similar to the preceding river segment, although less social interaction would likely occur below the landing at Osceola where many rental canoe trips would continue to end.

McLeod's Slough to Arcola Sandbar: 8.5 miles. The quiet waters classification for this segment would be identical to the existing slow speed zone designation; the impact of alternative A would be the same as the no-action alternative. Opportunities would be maintained for a mixture of nonmotorized and slow-moving motorized craft.

Arcola Sandbar to north limits of Stillwater: 5 miles. The active social recreation classification for this segment would be similar to the current rule for this segment, which involves no speed limit but a restriction on summer weekend waterskiing. Congestion which has become a concern in this narrow area would likely continue.

Stillwater to Catfish Bar: 13.5 miles. The active social recreation classification for this segment would allow extremely high-speed boating to continue, although speed limits might be set in certain areas. The existing no-wake zones in the Hudson area would remain under alternative A. The concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment would continue.

Catfish Bar to Prescott: 11.5 miles. The active social recreation classification for this segment would allow extremely high-speed boating to continue, although speed limits might be set in certain areas. The existing no-wake zones in the Catfish Bar and Kinnickinnic State Park areas would remain under alternative A. The concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment would continue.

Camping Experience. Camping would continue to be allowed with little or no restriction in the same way as the no-action alternative.

Conclusion

Overall, alternative A would be similar to the no-action alternative. Congestion problems would likely continue, primarily in the narrow section of river between Arcola sandbar and Stillwater, in the Hudson Narrows, and the Prescott Narrows. Extremely high-speed boating would continue, and associated safety and noise concerns would therefore continue. Increased use could alter the recreational experience, such as creating more crowded conditions at peak use times.

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IMPACTS ON NATURAL RESOURCES

Water Quality

Analysis. Overall boating totals are expected to increase under alternative A, so water quality impacts from petroleum products or day-use boaters who do not use proper toilet facilities would increase slightly as compared to the no-action alternative. Unrestricted camping north of Stillwater and at Hudson would have a slight negative impact on water quality as compared to the no-action alternative. There would be a modest increase in total residential development in areas not served by public sewer, leading to slightly greater risk of water quality impacts from failed on-site waste treatment systems.

Under alternative A there could be some bridge relocations. These projects could have short-term, adverse effects on water quality, such as increased sedimentation due to the installation of new bridge piers, although mitigation measures would likely minimize the impacts. (More detailed environmental documents would be prepared before these projects would be approved.)

Conclusion. With increased use levels, the potential for pollution due to user activities would increase as compared to the no-action alternative. There could be localized increases in impacts to water quality in heavily used areas where users are picnicking, camping, and boating, particularly near the islands. Some short-term impacts also could occur if bridges were relocated.

From a riverwide perspective, it is expected that pollution caused by potential developments would be short term. Pollution created by increased use would be transient and should have minimal effects on nutrient loads and on pollutant levels. Compared to current conditions, alternative A would be expected to result in a negligible to minor, long-term negative impact on the riverway's overall water quality.

Soils

Analysis. As under the no-action alternative, additional development could occur, including residential development in rural areas. Consequently, some soils would still be lost to development, although new soil disturbance would likely be reduced in the park and natural management areas (42% of the lower riverway) where less development and more restrictive land use regulations would be employed.

With increasing boating use, shoreline erosion caused by boat wakes would be slightly increased as compared to the no-action alternative. The area between the Arcola sandbar and Stillwater would continue to be the focus of much concern about wake-induced shoreline erosion.

Shoreline erosion, soil compaction, and the formation of social trails from campers would also slightly increase, as compared to the no-action alternative, due to relatively unrestricted camping outside the two prohibited camping areas. Bluff erosion from foot trails would be about the same as the no-action alternative.

Some bridge relocations could occur. Any bridge relocations would disturb additional soils along the riverbanks. However, with mitigation measures, it is expected that impacts from these developments would be localized and minor to moderate in magnitude. (As indicated under the preferred alternative, additional environmental documentation, with mitigation measures, would be required before these crossings would be approved.)

If the Army Corps of Engineers needed to do some dredging at the Kinnickinnic Narrows, this alternative would reduce the amount of dredged material that would need to be removed and disposed. If the dredged material could be reused for other purposes, soil in the riverway or nearby would not be altered by the disposal of the material. (The 1997 *Channel Maintenance Management Plan* directs that dredged material from the Kinnickinnic Narrows be placed on the delta at Kinnickinnic State park for beach nourishment.)

Conclusion. Under alternative A, shoreline erosion would continue or accelerate as river use increased. This would have minor, additional negative, long-term impacts on soils in localized areas on riverbanks and the islands. There would also be the potential for soil loss and disturbance due to new developments on private lands and from bridge relocations. From an overall perspective, compared to current conditions, alternative A probably would have a long-term, minor, negative impact on the soils in the lower riverway.

Vegetation

Analysis. Alternative A would share many of the same beneficial and negative impacts described under the preferred alternative. The alternatives would have the same beneficial effects in minimizing the loss of vegetation due to new development in the park and natural zones (42% of the riverway in alternative A); however, more vegetation could be lost due to new development in some other areas in alternative A, particularly adjacent to the municipalities. Both alternatives would have a minor positive effect on plant communities if the Wisconsin Department of Natural Resources proposed amendment to the state land use standards within the riverway was adopted. If dredging occurred between Stillwater and Prescott, alternative A would reduce the amount of vegetation that would be lost due to the deposition of dredged material.

Under alternative A bridge and utility line relocations would result in the loss or alteration of vegetation in localized areas. With mitigation measures, it is expected that these impacts would be minor to moderate in magnitude.

Alternative A would have the same type of impacts as the preferred alternative due to motorboat use and use of the shoreline and islands, but the impacts would likely be greater in alternative A due to increased user numbers. With increased motorboat use, boat wakes would continue or accelerate damage to plants along the shoreline and islands, particularly in heavily used stretches and/or stretches where boats are going at higher speeds.

In addition, more users would adversely affect vegetation in areas where they picnic and camp on the shoreline and islands, with vegetation being trampled, harvested, and cut for firewood. Disturbance of soils also would increase the likelihood of exotic plants like spotted knapweed and purple loosestrife becoming established. With use expected to increase on the lower riverway, and only limited restrictions on the use of most islands and shoreline, vegetation in more areas would likely be altered or lost.

Conclusion. Alternative A would have both negative and beneficial effects on the riverway's vegetation. Vegetative communities would continue to be altered and lost due to the activities of users and new developments in the riverway. With increased use levels, this impact would be expected to increase and more areas would be affected, particularly in heavily used areas on the islands and the shoreline, resulting in increases in localized, long-term impacts. Some minor to moderate vegetation loss also would occur if bridges and utility lines were relocated and/or submarine crossings were built. On the other hand, the land use management area allocation would have a beneficial effect, helping ensure the protection of vegetation on a large portion of the lower riverway. Efforts to maintain significant plant communities also would have a positive effect on the riverway vegetation. From an overall perspective, most of the riverway's vegetation would not be affected by users, new developments, or the management agencies. However, with increased use levels and new developments vegetation still would be lost or altered. Compared to the current situation, alternative A would be expected to result in an overall minor, long-term, adverse impact on the riverway's vegetation.

Fish and Wildlife

Analysis. Impacts on wildlife would not be significantly different for alternative A than the no-action alternative. Most of the lower riverway management actions in this alternative would continue to promote the protection of fish and wildlife populations and habitats. No actions would be taken that would adversely affect areas known to be of special importance for breeding, nesting, foraging, or wintering.

However, rural home development creates patches that disrupt the movement of some wildlife, especially those most sensitive to human activity. There would be slightly more new rural home development under Alternative A as compared to the no-action alternative, but the differences in terms of wildlife impacts are likely not measurable, especially considering much of the rural home development that could occur in the riverway has already been built.

Many of the lower riverway's wildlife populations and habitats have already been affected in varying degrees by recreational users and nearby developments. Some individual animals might be disturbed or temporarily displaced by the sounds of more motorboats and groups floating down the river, but this is not expected to substantially affect the lower riverway's fish and wildlife populations. Fishing would increase because of expanded use, but with careful monitoring and enforcement of the states' regulations, there should be no adverse effects on the fisheries.

Conclusion. Impacts on fish and wildlife populations would be expected to be negligible to minor.

Threatened and Endangered Species

Analysis. Implementation of alternative A would allow an increase in the number of recreational boats using the river as compared to the no-action alternative, so the potential to impact threatened and endangered species could increase slightly. It is not anticipated that increased use levels under alternative A would result in adverse impacts on listed species or their habitats with the continued use of appropriate mitigation. A slight increase in new rural home development could also increase the potential for impacts on some threatened and endangered species.

The potential adverse effects on the federally listed Higgins' eye and winged mapleleaf mussels would be the same as described under the preferred alternative. Although these activities have occurred or might be occurring on the lower St. Croix, the effects on the Higgins' eye and winged mapleleaf mussel populations are unknown — recreational uses are likely "taking" individual mussels, which could be adversely affecting these species. Additional use might or might not exacerbate this possible impact.

The following goals, strategies, or actions would support the protection and recovery of these species: protection and improvement of water quality, development of a public information/education program that includes mussels, development of means to improve mussel information/coordination among various agencies, organizations, etc., continued enforcement of regulations prohibiting harvesting or taking of mussels, and implementation of the zebra mussel action plan (see "Management Directions Common to All Alternatives" section). The managing agencies would also implement their respective components of the U.S. Fish and Wildlife's recovery plans for the winged mapleleaf mussel and the Higgins' eye mussel. These components address a wide variety of tasks, including actions to minimize human disturbance and destruction to the federally listed mussels, such as quantification of the magnitude of potential treats (harvesting, swimming, wading, digging, small recreational watercraft, and commercial paddlewheel watercraft) and identification of specific geographic locations of greatest concern; posting of educational signs; conduction of educational programs; and review of paddleboat operations to minimize boat operation impacts.

Conclusion. The uses, use levels, and developments under alternative A would not likely adversely affect most federal and state listed species in the lower riverway (with adequate surveys, consultation with the U.S. Fish and Wildlife Service and state biologists, and the application of appropriate mitigation measures). Recreational activities already might be adversely affecting the federally endangered Higgins' eye and winged mapleleaf mussel populations on the lower St. Croix. Increased use levels near Hudson and in the Interstate Park area (where the mussels primarily occur) would be expected in the future, which might increase the potential for impacts. Formal consultations need to be initiated with the U.S. Fish and Wildlife Service to determine what actions need to be taken to ensure the conservation of these species.

IMPACTS ON CULTURAL RESOURCES

Analysis

The impacts on cultural resources under this alternative would be similar to those under the preferred alternative. Limited new development could be built within existing towns and communities. As in the preferred alternative, municipal governments would be encouraged to preserve the historic character of their communities by adopting and enforcing historic preservation ordinances and architectural standards that would require new development to be compatible with the design elements of the historic community. Management would work to maintain visual characteristics, thus helping to ensure the preservation of any significant historic structures identified as eligible for listing on the National Register of Historic Places.

Limited new development would be allowed outside the municipalities in relatively undeveloped rural portions of the riverway. Some of this new development might be visible from the riverway, which could pose potential impacts on cultural landscapes. However, new development would be consistent with the riverway's rural and natural character. The completion of the cultural landscape inventory would help ensure that new development in outlying areas was appropriate and consistent with the riverway's rural and natural character, thereby minimizing impacts on significant cultural or historic landscapes. Archeological resources could be at a slightly higher risk as a result of new development in previously undeveloped areas.

Conclusion

The impacts on cultural resources under this alternative would be similar to those under the preferred alternative. Limited development would be allowed outside municipalities in relatively undeveloped rural portions of the riverway. Municipal governments would be encouraged to preserve the historic character of their communities by adopting and enforcing historic preservation and architectural standards that would require new development to be compatible with the design elements of the historic community. Archeological resources may be at a slightly higher risk because of new development in previously undeveloped areas.

IMPACTS ON SOCIOECONOMIC ENVIRONMENT

Local Economy

Analysis. This alternative does not call for large expenditures by the Park Service or the states for the development of infrastructure, so there would be little direct economic impact. Existing positive effects on local economy from expenditures from tourists and other recreationists would continue. Increased riverway use would result in more people accessing the riverway and perhaps encourage additional commercial activity along the riverway. Alternative A would also allow some growth in urban areas, with the conversion of some existing rural landscapes. Consequently, limited additional impacts on the long-term property tax base of the local communities due to the increased potential for new development would occur.

Conclusion. Positive impacts to the local economy would be negligible to minor compared to the no-action alternative.

Tourism

Analysis. Tourism in the St. Croix Valley is partially linked to the area's historic character. In that context, alternative A's emphasis on historic structure protection and enhancement of the historic character of valley communities would have a minor positive impact on tourism. Boating-related tourism would increase slightly.

Conclusion. There would be some minor positive effects on tourism.

Land Values

Analysis. Land values would not be impacted by the alternative A. Local property values have probably been and would likely continue to be beneficially affected by the presence of the riverway as described under the no-action alternative.

Conclusion. There would be no new impacts on land values.

Landownership/Landowners

Analysis. Alternative A proposes a modest increase in scenic easement acquisition by the two states; National Park Service acquisition is essentially complete and would not change. As a result, this alternative would have negligible impact on landownership.

In general, alternative A could affect some landowners in a manner that would have a minor to moderate impact when compared to the no-action alternative. For instance, preserving the scenic character of the riverway might mean that some landowners within the riverway's boundary might be constrained when they wanted to make certain improvements to their property. However, expansion of urban areas would allow some landowners more flexibility in developing their property.

Conclusion. There would be negligible impacts on landownership. Some landowners would benefit from reduced restrictions on property improvements in and near towns, although there would be constraints on new development to maintain historic character. Some landowners would be negatively affected by restrictions on new development or improvements in some areas outside of towns. There would also be minor to moderate benefits to landowners from a reduction in conflicts and shoreline erosion associated with recreational use in some areas of the riverway.

CUMULATIVE EFFECTS

The entire viewshed of the riverway as seen from the river would not be encompassed within the riverway boundaries, therefore, visual encroachments outside the boundary have the potential to impact the scenic resources of the riverway. In the federal zone, the high bluffs, rural character, predominance of protected areas along this section of the river, the primarily unincorporated zoning, and the fact that the viewshed outside the boundary would be

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less than the state-administered zone would mean that the concerns would not be as great here as in the state- administered zone. In this zone more of the viewshed would be outside the riverway boundary, the area would have a series of benches visible from the river, there would be less high bluff areas, more of the area would be incorporated, and its proximity to the Minneapolis/St. Paul area would likely mean greater growth. For those areas within the viewshed, yet outside the riverway boundary, local zoning standards would be the primary methods of controlling scenic impacts to the riverway. Mitigating methodologies such as the encouragement of the preservation and maintenance of mature vegetation, planting of additional vegetative buffering, the protection of cultural resources, and the prohibition of the construction of any more extremely visible towers within the viewshed would be beneficial to the preservation of the riverway's scenic quality. Actions taken outside the riverway boundary could have negligible to major impacts on the scenic resources of the riverway, depending on the magnitude of change. Therefore, the cumulative effects of NPS/state actions on the scenic quality of the viewshed would be negligibly to moderately beneficial, depending on the magnitude of changes to the scenic resources outside the riverway boundary.

Impacts from increased recreational use within the riverway and managing agency actions would contribute incrementally to impacts from land use changes and population growth in the watershed and larger region. Overall, the land use management allocation would contribute to a minor positive cumulative impact within the riverway and watershed.

None of the management actions are expected to add substantively to the cumulative effects on cultural resources. Growth and land use changes could affect cultural resources adjacent to or within the viewshed of the riverway. The cumulative effects of the management actions would help mitigate the effects of population growth and development.

Many communities and counties in Minnesota and Wisconsin are in the process of revising their comprehensive plans and related ordinances. Some of these revised plans and ordinances might include land use and development provisions applicable to the river corridor that would go beyond guidance provided in this document. Therefore, in some areas, cumulative impacts of land management measures might have negligible to moderate additional effects on certain property owners as compared to current conditions.

The economic and population growth in the region is expected to continue. The relatively small number of jobs and expenditures on management of the riverway would only have a minor effect on the expected growth of the total economy of the region. Therefore, there would be no appreciable socioeconomic cumulative impacts from implementation of this alternative occurring in conjunction with the region's expected overall population and economy of the region.

RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The proposed management area allocation, restrictions on island, shoreline, and boating use, along with the proposed inventory,

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monitoring, and research programs for the riverway, would contribute to the long-term protection and preservation of resources and scenic character of the landscape. Maintenance of plant communities would also enhance long-term productivity of natural communities.

UNAVOIDABLE ADVERSE EFFECTS

Some minor adverse impacts to natural resources would occur. This alternative, would place the fewest restrictions on recreational use. In order to meet the scenic and resource protection purposes of the riverway development, restrictions on local landowners would implemented. To meet the recreational purposes of the riverway, some conflicts between local landowners and recreational users would continue and likely increase.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Some new residential and commercial development would likely continue on private lands within the riverway boundary. Potentially, new river crossings might also occur. It is expected that this new development would result in the long-term localized loss of vegetation, soils, and wildlife habitat.

Any action that led to the loss of individual, federally listed mussel species or their habitat would contribute to the loss of the species as an ecological and genetic resource. It is possible that this alternative would contribute to their decline. However, it is expected that the implementation of actions outlined in the recovery plans for these species would avoid this situation and contribute to their conservation.

IMPACTS OF ALTERNATIVE B

IMPACTS ON SCENIC RESOURCES

Analysis

Scenic resources in the riverway are protected primarily through land acquisition or through regulatory controls on land development. No significant land acquisition would occur in implementing alternative B. The establishment of seven land management categories compared to two under the existing management program would provide additional scenic resource protection, as compared to the no-action alternative. However, under this alternative, more restrictions would be imposed to avoid additional rural development that would be visible from the river. The riverway managing agencies would also require local governments to protect the historic character of municipalities, which would reduce potential impacts to scenic values in municipalities from new development.

The following analysis evaluates scenic impact associated with the application of the land management areas on each river segment.

The Dalles of the St. Croix to Rock Island: 3.5 miles. Scenic resources within the two state parks in this river segment would continue to be protected by state ownership (as they would be under the no-action alternative). No impact to scenic resources would occur because any future development would occur at existing development nodes, and scenic and relatively undisturbed natural areas would be maintained. Private lands in Minnesota in the southern portion of this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Osceola Area (Rock Island to McLeod Slough): 10 miles. Osceola itself is classified as small town that would afford an increased level of scenic protection compared to the existing urban standard to minimize new development visible from the river. Most of this segment would be classified as natural, however, and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Marine Area (McLeod Slough to Arcola Sandbar via Page's Slough): 8.5 miles.

Marine on St. Croix itself is classified as small town historic, which would afford an increased level of scenic protection compared to the existing urban standard. Additional restrictions would be placed on development to minimize new development visible from the river and also to protect historic character. William O'Brien State Park would receive the same high level of scenic resource protection as compared to the no-action alternative. Most of the remainder of this segment in Minnesota would be classified as rural residential and would receive increased

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protection as compared to the rural classification under the no-action alternative. The Wisconsin side of the river would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Rice Lake Flats (Dead Man's Slough to Arcola Sandbar via St. Croix Islands Wildlife Area): 2.5 miles. St. Croix Islands Wildlife Area is owned by Wisconsin DNR and would receive the same high level of scenic resource protection as compared to the no-action alternative, which would maintain the undisturbed natural appearance. The remainder of this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Arcola Gorge (Arcola Sandbar to Head of Lake St. Croix): 5 miles. The Minnesota side of the river in this segment would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative. The Wisconsin side of the river would mostly be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources. A small portion of the southern part of this segment in Wisconsin would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative.

Urban Stillwater (Head of Lake St. Croix to Stillwater Downtown Courtesy Docks): 2 miles. The northern portion of this segment in Minnesota is not intensively developed; it would be classified as small town with the result that its level of scenic protection would be increased compared to the current urban classification. The southern portion of this segment includes the heavily developed downtown Stillwater area; it would be classified as river town, and additional restrictions would be placed on development to minimize new development visible from the river and also to protect historic character. This would provide slightly more scenic protection than the current urban classification, which would reduce potential scenic impacts.

The Wisconsin side would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative.

South Stillwater-Bayport Area (Stillwater Downtown Courtesy Docks to Andersen Point): 3 miles. Most of this segment in Minnesota would be classified as river town, and additional restrictions would be placed on development to minimize new development visible from the river and also to protect historic character. This would provide slightly more scenic protection than the current urban classification, which would reduce potential scenic impacts. The Andersen Point area would be classified as small town, with its level of scenic protection increased compared to the current urban classification. The Wisconsin side would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative.

Bayport-North Hudson Area (Andersen Point to Willow River Dam): 2 miles. In Minnesota, the area between Andersen Point and the south limits of Bayport would be classified as small town, with the result that its level of scenic protection would be increased compared to the current urban classification. The southern portion of this segment in Minnesota would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative. Most of the Wisconsin side would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative. The southern portion of this segment in Wisconsin lies in North Hudson and would be classified as small town, with the result that its level of scenic protection would be increased compared to the current urban classification.

Urban Hudson (Willow River Dam to Interstate 94): 2 miles. The Minnesota side in this segment would be primarily classified as small town, with its level of scenic protection increased compared to the current urban classification. The Wisconsin side would be classified as river town, and additional restrictions would be placed on development to minimize new development visible from the river and also to protect historic character. This would provide slightly more scenic protection than the current urban classification, which would reduce potential scenic impacts.

Open Lake (Interstate 94 to Catfish Bar): 4.5 miles. The Minnesota side in this segment would be classified as small town, with the result that its level of scenic protection would be increased compared to the current urban classification. The southern portion of Hudson would also be classified as small town. The remainder of this segment in Wisconsin would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative.

Catfish to Kinnickinnic (Catfish Bar to Kinnickinnic Narrows): 5 miles. In Minnesota, the old Afton village area would be classified as small town historic, with its level of scenic protection increased compared to the current urban classification, with additional restrictions on development to minimize new development visible from the river and also to protect historic character. The southern portion of Afton and the area south of Afton State Park, as well as all of the Wisconsin side, would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative. Afton State Park would receive the same high level of scenic resource protection as compared to the no-action alternative.

Kinnickinnic Narrows: 0.5 miles. The Minnesota side of the river in this segment

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would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative. Kinnickinnic State Park in Wisconsin would receive the same high level of scenic resource protection as compared to the no-action alternative.

Kinnickinnic to Prescott (Kinnickinnic Narrows to Mississippi Confluence at Prescott): 6 miles. Much of the Minnesota side of the river in this segment would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative. St. Croix Bluffs Regional Park would receive the same high level of scenic resource protection as compared to the no-action alternative. Carpenter Nature Center would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. In Wisconsin, the area north of Prescott would be classified as rural residential and would receive increased protection as compared to the rural classification under the no-action alternative. Prescott would be classified as river town, which would provide slightly more scenic protection than the current urban classification.

By encouraging the maintenance of significant plant communities on both public and private lands through voluntary actions, education, and awareness-building, these resources would remain part of the visual landscape of the riverway. These voluntary provisions could have a long-term beneficial impact on the visual resources of the riverway by preserving existing parcels of indigenous vegetation. However, these impacts would be minor to negligible because these actions would be voluntary, and most individuals would consider these areas as natural landscapes whether or not the vegetative mosaics included a diversity of significant plant communities.

An amendment to the Wisconsin-managed forest law (Chapter NR 118) would be pursued, which would result in a long-term minor beneficial impact for the scenic resources of the riverway by providing landowners with more flexibility to preserve these resources.

Continued adherence to NPS policies that perpetuate native plant communities would result in a long-term, minor, beneficial impact to the scenic resources. Because minimal changes would be permitted in the number, type, scale, or characteristics of the river crossings (including the restriction of road, railroad, and overhead lines to existing corridors), there could be little noticeable change in the overhead visual intrusions on the riverway. Even though no increases would be allowed in the size or number of lines in existing submarine crossings, overhead utility lines could be relocated to existing submarine crossings. This latter action could reduce the amount of overhead visual intrusions on the riverway landscape. Otherwise, there would be negligible change to the visual resources of the riverway related to river crossings. Compared to the no-action alternative, the alternative B would avoid potentially major long-term impacts to scenic quality from construction of large-scale bridge crossings or relocation of transmission lines to highly scenic or largely undisturbed corridors.

Conclusion

Overall, alternative B would have a moderate, positive impact on scenic resources compared to the no-action alternative. Also, potentially major, long-term impacts from changes to river crossings would be avoided.

IMPACTS ON RECREATIONAL USE

Analysis

The primary goal of alternative B with respect to boating recreation would be to allow modest growth in total boating and to minimize user conflicts through increased regulation. The existing diversity of boating opportunities would remain, with the exception of extremely high-speed boating activities. Boaters interested in that activity would be displaced to another resource. These impacts are evaluated for each river segment.

Backwaters from the Dalles of the St. Croix to William O'Brien State Park: 16 miles. The natural waters classification for this segment would be identical to the existing no-wake designation; the impact of alternative B would be the same as the no-action alternative, which would be to maintain the quiet and little-used character of the recreational experience.

Backwaters from William O'Brien State Park to Arcola Sandbar: 6 miles. The natural classification for this segment would be identical to the existing no-wake designation; the impact of alternative B would be the same as the no-action alternative.

Backwaters from Arcola Sandbar to north limits of Stillwater: 5 miles. The natural waters classification for this segment would be identical to the existing no-wake designation; the impact of alternative B would be the same as the no-action alternative, which would be to maintain the quiet and little-used character of the recreational experience.

Dalles of the St. Croix to Rock Island: 3.5 miles. The quiet waters classification for this segment would be identical to the existing slow speed zone designation. The impact of Alternative B would be the same as the no-action alternative, which would be to maintain the slow speeds, low noise levels, and the more social experience associated with relatively large numbers of canoers.

Rock Island to McLeod's Slough: 10 miles. The quiet waters classification for this segment would be identical to the existing slow-speed zone designation; the impact of alternative B would be the same as the no-action alternative. Thus, recreational use would be similar to the preceding river segment, although less social interaction would likely occur below the landing at Osceola where many rental canoe trips would continue to end.

McLeod's Slough to Arcola Sandbar: 8.5 miles. The quiet waters classification for this segment would be identical to the existing slow-speed zone designation; the impact of alternative B would be the same as the no-action alternative. Opportunities would be maintained for a mixture of nonmotorized and slow-moving motorized craft.

Arcola Sandbar to north limits of Stillwater: 5 miles. The moderate recreation classification for this segment would involve a speed limit and a possible restric-

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tion on waterskiing. This is slightly different that the current rule, which involves no speed limit but a firm restriction on summer weekend waterskiing. Congestion in this narrow area has become a concern and the imposition of a speed limit would be considered a positive impact on congestion and shoreline erosion concerns.

Stillwater to Catfish Bar: 13.5 miles. The active social recreation classification for this segment would allow extremely high-speed boating to continue, although speed limits might be set in certain areas. The existing no-wake zones in the Hudson area would remain under alternative B. The concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment would continue.

Catfish Bar to Prescott: 11.5 miles. The moderate recreation classification for this segment would involve a speed limit and a possible restriction on waterskiing; under the no-action alternative there would be no speed limit. The existing no-wake zones in the Catfish Bar and Kinnickinnic State Park areas would remain under alternative B. There has been growing concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment; which would be eliminated under alternative B, forcing boaters who want to travel at those speeds to use a different resource. The imposition of a speed limit in this area would be considered a minor positive impact on the environment.

Camping Experience. A camping management plan would be developed for boat-related camping north of Stillwater that would impose gradually increased restrictions on camping. This would result in fewer boat-in campsites than currently exist, enhancing privacy and reducing shoreline erosion problems, but reducing the opportunity for more social camping situations and reducing the overall number of camping occasions, displacing some campers to another resource. At Hudson, campers without on-board toilets would be displaced. The outcome would be reduced shoreline erosion between the Arcola sandbar and Stillwater and reduced water quality problems there and at Hudson, but an increase in displaced recreational users.

Conclusion

Overall, alternative B would provide minor, possibly negligible, positive impacts on recreational use. Some people might be negatively impacted by the additional regulation. Also, a few riverway users, those seeking to travel at high speeds and some island campers, would be displaced from part of the riverway.

IMPACTS ON NATURAL RESOURCES

Water Quality

Analysis. Overall boating totals are expected to increase slightly under alternative B, therefore, water quality impacts from petroleum products or day-use boaters who do not use proper toilet facilities would be slightly higher than the no-action alternative. Additional restrictions on camping north of Stillwater and at Hudson would have a slight positive impact on water quality as compared to the no-action alternative. There would be a slight decrease in total residential development in areas not served by public sewer, leading to slightly less risk of water quality impacts from failed on-site waste treatment systems (as compared to the no-action alternative).

Under alternative B there could be some bridge and utility line replacements, which could have short term adverse effects on water quality, such as increased sedimentation due to the installation of new bridge piers. Mitigation measures would likely minimize these impacts. (More detailed environmental documents would be prepared before a bridge replacement would be approved.)

Conclusion. With slightly increased use levels, the potential for pollution due to user activities would be slightly higher. Additional restrictions on camping north of Stillwater and at Hudson would have a slight positive impact on water quality. Some short-term impacts also could occur if bridges or transmission lines are replaced. From a riverwide perspective, it is expected that pollution due to construction of potential developments would be short term, while pollution due to increased users would be transient and should have minor to negligible effects on pollutant levels.

Soils

Analysis. As under the no-action alternative, additional development could occur, including residential development in rural areas. Consequently, some soils would still be lost to development, although new soil disturbance would likely be reduced in the park and natural management areas (43% of the lower riverway) where less development and more restrictive land use regulations would be employed.

Slower boat speed limits in some areas would, to some extent, reduce the amount of shoreline erosion that occurs as a result of boat wakes. The area between the Arcola sandbar and Stillwater is the focus of much concern about wake-induced shoreline erosion, and a moderate speed limit there would likely do little to alter current impacts. With increasing boating use, shoreline erosion caused by boat wakes would be slightly increased as compared to the no-action alternative.

Shoreline erosion, soil compaction, and the formation of social trails from campers would be slightly reduced, as compared to the no-action alternative, by limitations and overall reductions in camping north of Stillwater. Localized bluff erosion from foot trails would be about the same as the no-action alternative.

There could be some bridge and utility line replacements under alternative B, although only a few areas would likely be affected during the life of this plan. Since these replacements would only be permitted in existing corridors, additional soil disturbance would be limited to areas that likely have already been altered. (Additional environmental documentation, with mitigation measures, would be required before these crossings would be approved.) Potential soil disturbance that could occur from new submarine crossings would be prevented.

If the Army Corps of Engineers needed to do some dredging at the Kinnickinnic Narrows, this alternative would reduce the amount of dredged material that would need to be removed and disposed. If the dredged material could be reused for other purposes, soil in the riverway or nearby would not be altered by the disposal of the material. (The 1997 *Channel Maintenance Management Plan* directs that dredged material from the Kinnickinnic Narrows be placed on the delta at Kinnickinnic State park for beach nourishment.)

Conclusion. Under alternative B, shoreline erosion would continue or slightly accelerate as river use increased. This would have minor negative, long-term impacts on soils in localized areas on riverbanks and the islands. However, the actions proposed for managing the islands and public shoreline north of Stillwater would be expected to have a positive effect, reducing erosion and soil compaction. There would also be the potential for soil loss and disturbance due to new developments on private lands and from bridge relocations. However, the land use management areas would prevent potential soil disturbance and loss on a large portion of the lower riverway. From an overall perspective, compared to current conditions alternative B probably would have a long-term, negligible to minor, positive impact.

Vegetation

Analysis. Alternative B would share many of the same beneficial and negative impacts described under the preferred alternative. The alternative would have a beneficial effect in minimizing the loss of vegetation due to new development in the park and natural zones (43% of the riverway in alternative B). Alternative B also would have a minor positive effect on plant communities if the Wisconsin Department of Natural Resources proposed amendment to the state land use standards within the riverway is adopted.

Both alternative B and the preferred alternative would have the same effects on vegetation due to bridge/utility line replacements and dredging. Very little additional vegetation would be lost or disturbed due to bridge and utility line replacements, and this disturbance probably would be limited to areas that already have been altered. If dredging occurred between Stillwater and Prescott, alternative B would reduce the amount of vegetation that would be lost due to the deposition of dredged material. However, unlike the previous action alternatives, alternative B would not allow additional submarine crossings. This would prevent potential impacts on vegetation due to the construction of new pipelines near the riverbanks.

Alternative B would have the same type of impacts as the preferred alternative due to motorboat use. Boat wakes are believed to be affecting vegetation along the shoreline and islands, and this impact would continue, particularly in heavily used stretches and/or stretches that high-speed boats use. Imposition of moderate speed limits from Arcola sandbar to Stillwater and below Catfish Bar would a have negligible positive impact on shoreline erosion.

Users would continue to trample vegetation in localized areas when they picnic on the shoreline and islands and camp on the islands south of Stillwater (i.e., the Hudson islands). Some users probably would continue to damage trees, stripping bark from birch trees, cutting saplings, and pulling down branches for firewood. Disturbance of soils also would increase the likelihood of exotic plants like spotted knapweed and purple loosestrife becoming established. However, alternative B should have a beneficial effect on the islands and public shorelines north of Stillwater, reducing the loss of vegetation, due to increased restrictions on camping. Limiting camping in areas to designated sites would be expected to reduce the extent of vegetation disturbance and encourage native plants to become reestablished (although day users still could trample vegetation and introduce exotics).

Conclusion. Like the other action alternatives, alternative B would have both negative and beneficial effects on the riverway's vegetation. Vegetative communities would continue to be altered and lost due to the activities of users and new developments in the riverway. Some minor vegetation loss also would occur if bridge or transmission line replacements were built. On the other hand, the land management area allocation would have a beneficial effect, helping ensure the protection of vegetation on a large portion of the lower riverway. Efforts to maintain significant plant communities as well as restrictions on camping would also have a positive effect on the riverway vegetation.

From an overall perspective, most of the riverway's vegetation would not be affected by users, new developments, or the managing agencies. Compared to the current situation, alternative B would be expected to have a negligible to minor, long-term, positive impact on the riverway's vegetation.

Fish and Wildlife

Analysis. Impacts on wildlife would not be significantly different for alternative B than the no-action alternative. Most of the lower riverway management actions in this alternative would continue to promote the protection of fish and wildlife populations and habitats. No actions would be taken that would adversely affect areas known to be of special importance for breeding, nesting, foraging, or wintering.

Rural home development creates patches that disrupt the movement of some wildlife, especially those most sensitive to human activity. There would be slightly less new rural home development under alternative B as compared to the no-action alternative, but the differences in terms of wildlife impacts are likely not measurable, especially considering much of the rural home development that could occur in the riverway has already been built.

Many of the lower riverway's wildlife populations and habitats have already been affected in varying degrees by recreational users and nearby developments. Some individual animals might be disturbed or temporarily displaced by the sounds of more motorboats and groups floating down the river, but this is not expected to substantially affect the lower riverway's fish and wildlife populations.

Conclusion. Impacts on fish and wildlife populations would be expected to be negligible to minor.

Threatened and Endangered Species

Analysis. Implementation of alternative B would not significantly change the number of recreational boats using the river as compared to the no-action alternative. The potential for recreational impacts is not expected to change with the continued use of appropriate mitigation (e.g., keeping people away from bald eagle nests). This alternative would maintain the diversity of native plant communities on federal and state lands, and encourage private landowners to do likewise, which should help protect species like the Karner blue butterfly. A slight reduction in new rural home development could decrease the potential for impacts to some threatened and endangered species. Therefore, this alternative would not likely adversely affect threatened and endangered species (with the possible exception of certain mussel species).

Like all of the action alternatives, there is the potential in alternative B that the federally listed Higgins' eye and winged mapleleaf mussels could be adversely affected. However, it is not known what effect these activities are having on the Higgins' eye and winged mapleleaf mussel populations — recreational uses are likely "taking" individual mussels, which may be adversely affecting these species.

The following goals, strategies, or actions would support the protection and recovery of these species: protection and improvement of water quality, development of a public information/education program that includes mussels, development of means to improve mussel information/coordination among various agencies, organizations, etc., continued enforcement of regulations prohibiting harvesting or taking of mussels, and implementation of the zebra mussel response plan (see "Management Directions Common to All Alternatives" section). The managing agencies would also implement their respective components of the U.S. Fish and Wildlife's recovery plans for the winged mapleleaf mussel and the Higgins' eye mussel. These components address a wide variety of tasks, including actions to minimize human disturbance and destruction to the federally listed mussels, such as quantification of the magnitude of potential threats like harvesting, swimming, wading, digging, and small recreational watercraft and identification of specific geographic locations of greatest concern; posting of educational signs; presenting educational programs; and review of paddleboat operations to minimize boat operation impacts.

Conclusion. The expected uses, user numbers, and developments under alternative B are not likely to adversely affect most federal and state listed species in the lower riverway (with adequate surveys, consultation with the U.S. Fish and Wildlife Service and state biologists, and the application of appropriate mitigation measures). Recreational activities already might be adversely affecting the federally endangered Higgins' eye and winged mapleleaf mussel on the lower St. Croix. Formal consultations would need to be initiated with the U.S. Fish and Wildlife Service to determine what actions need to be taken to ensure the conservation of these species.

IMPACTS ON CULTURAL RESOURCES

Analysis

This alternative would focus on maintaining the current (1997) visual qualities of the riverway . There would be less potential for new development under this alternative than under alternative A. Maintaining the landscape's visual qualities would pose no adverse impacts for the cultural resources in the riverway.

Alternative B would require local governments in the river town and small town historic districts to develop ordinances protecting historic structures and requiring new development to be consistent with the historic character of those communities. As a result, alternative B would result in minor improvements in protection of cultural resources.

Archeological resources would be at a lower risk due to increased restrictions in areas within the riverway. Any increased use of public shoreline should pose no impacts on these resources, since these areas were previously disturbed. Minor restrictions placed on camping would be used to protect sensitive archeological sites.

The number, significance, and condition of the riverway's cultural landscapes currently is unknown. However, this alternative would pose no adverse impacts on any significant cultural or historic landscapes that may later be identified in the riverway. Maintaining the riverway's visual qualities by restricting development would minimize impacts on the riverway's cultural landscapes. The completion of the cultural landscape inventory would enhance future planning efforts to protect these resources.

Conclusion

Cultural resources would be at minimal risk under this alternative because of the emphasis on maintaining the riverway's visual qualities. Additionally, this alternative would result in minor improvements in protection of cultural resources in the river town and small town historic districts. Archeological resources would face minimal risks cue to restrictions on development within those portions of the riverway that would be visible from the riverway. Restriction on development would help safeguard any significant cultural landscapes that might be identified in the cultural landscape inventory.

IMPACTS ON SOCIOECONOMIC ENVIRONMENT

Local Economy

Analysis. There would be little direct economic impact because no additional large expenditures by the states or by the Park Service are proposed. Application of the land management areas would not result in greatly different restrictions on new development for most areas within the riverway. Placement of the new land management categories would be similar to the existing incorporated and unincorporated classifications. Exceptions to this would be areas designated as natural where increased restrictions would likely occur (although development could still occur) and in towns where some restrictions would be reduced (but with historic structure protection). Consequently, limited additional negligible to minor impacts on the long-term property tax base of the local communities due to restrictions on new development would occur. Existing positive

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effects on the local economy from expenditures from tourists and other recreationists would continue, but would not be appreciably changed.

Conclusion. Positive impacts to the local economy would be negligible to minor compared to the no-action alternative.

Tourism

Analysis. Tourism in the St. Croix Valley is partially linked to the area's historic character. In that context, alternative B's emphasis on historic structure protection and enhancement of the historic character of valley communities would have a minor positive impact on tourism. Boating-related tourism would increase slightly.

Conclusion. There would be some negligible to minor positive effects on tourism.

Land Values

Analysis. Land values would not be impacted by the preferred alternative. Local property values have probably been and would likely continue to be beneficially affected by the presence of the riverway as under the no-action alternative.

Conclusion. There would be no new impacts on land values.

Landownership/Landowners

Analysis. Alternative B proposes a modest increase in scenic easement acquisition by the two states; National Park Service acquisition is essentially complete and would not change. As a result alternative B would have negligible impact on landownership.

In general under alternative B, land use regulations would be slightly more restrictive than under the no-action alternative, considering much of the rural home development that could occur has already been built. Thus, alternative B could affect some landowners in a manner that would have a minor to moderate impact on flexibility in developing their property when compared to the no-action alternative.

There would be a minor to moderate beneficial impact for local landowners in some areas of the riverway due to a reduction in conflicts with recreational users, particularly in popular camping areas north of Stillwater. Local landowners would also likely benefit from a reduction in the periodic loud noise generated by higher boat speeds and some minimal reduced shoreline effects from wave action.

Conclusion. There would be negligible impacts on landownership. Some landowners would benefit from reduced restrictions on property improvements, although there would be constraints on new development to maintain historic character. Some landowners would be negatively affected by restrictions on new development or improvements in areas outside of towns. There would also be minor to moderate benefits to landowners from a reduction in conflicts and shoreline erosion associated with recreational use in some areas of the riverway.

CUMULATIVE EFFECTS

The entire viewshed of the riverway as seen from the river would not be encompassed within the riverway boundaries, therefore, visual encroachments outside the boundary have the potential to impact the scenic resources of the riverway. In the federal zone, the high bluffs, rural character, predominance of protected areas along this section of the river, the primarily unincorporated zoning, and the fact that the viewshed outside the boundary would be less than the state-administered zone would mean that the concerns would not be as great here as in the state- administered zone. In this zone more of the viewshed would be outside the riverway boundary, the area would have a series of benches visible from the river, there would be less high bluff areas, more of the area would be incorporated, and its proximity to the Minneapolis/St. Paul area would mean greater growth.

For those areas within the viewshed, yet outside the riverway boundary, local zoning standards would be the primary methods of controlling scenic impacts to the riverway. Mitigating methodologies such as the encouragement of the preservation and maintenance of mature vegetation, planting of additional vegetative buffering, the protection of cultural resources, and the prohibition of the construction of any more extremely visible towers within the viewshed would be beneficial to the preservation of the riverway's scenic quality. Actions taken outside the riverway boundary could have negligible to major impacts on the scenic resources of the riverway, depending on the magnitude of change. Therefore, the cumulative effects of NPS/state actions on the scenic quality of the viewshed would be negligibly to moderately beneficial, depending on the magnitude of changes to the scenic resources outside the riverway boundary.

As under the previous alternatives, impacts from recreational use within the riverway and managing agency actions would contribute incrementally to impacts from land use changes and population growth in the watershed and larger region. Overall, the land use management allocation would contribute to a minor positive cumulative impact within the riverway and watershed.

None of the management actions are expected to add substantively to the cumulative effects on cultural resources. Growth and land use changes could affect cultural resources adjacent to or within the viewshed of the riverway. The cumulative effects of the management actions would help mitigate the effects of population growth and development.

Many communities and counties in Minnesota and Wisconsin are in the process of revising their comprehensive plans and related ordinances. Some of these revised plans and ordinances may include land use and development provisions applicable to the river corridor that would go beyond guidance provided in this document.

The economic and population growth in the region is expected to continue. The relatively small number of jobs and expenditures on management of the riverway would only have a minor effect on the expected growth of the total economy of the region. Therefore, there would be no appreciable socioeconomic cumulative impacts from implementation of this alternative occurring in conjunction with

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the region's expected overall population and economy of the region.

RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The proposed management area allocation, restrictions on island, shoreline, and boating use, along with the proposed inventory, monitoring, and research programs for the riverway, would contribute to the long-term protection and preservation of resources and scenic character of the landscape. The maintenance of plant communities would also enhance long-term productivity of natural communities.

UNAVOIDABLE ADVERSE EFFECTS

Some minor to locally moderate adverse impacts to natural resources would occur. In the process of resolving conflicts among different uses or reducing resource impacts, restrictions would be placed on particular uses, having an adverse effect on some users. In order to meet the scenic and resource protection purposes of the riverway development restrictions on local landowner would implemented. To meet the recreational purposes of the riverway, some conflicts between local landowners and recreational users would continue.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Some new residential and commercial development would likely continue to occur on private lands within the riverway boundary. Potentially, new river crossings may also occur. It is expected that this new development would result in the long-term localized loss of vegetation, soils, and wildlife habitat.

Any action that led to the loss of individual federally listed mussel species or their habitat would contribute to the loss of the species as an ecological and genetic resource. It is possible that this alternative would contribute to their decline. However, it is expected that the implementation of actions outlined in the recovery plans for these species would avoid this situation and contribute to their conservation.

IMPACTS OF ALTERNATIVE C

IMPACTS ON SCENIC RESOURCES

Scenic resources would be affected under alternative C in exactly the same fashion as alternative B. Overall, alternative C would have a moderate positive impact on scenic resources compared to the no-action alternative. Also, potentially major long-term impacts from changes to river crossings would be avoided.

IMPACTS ON RECREATIONAL USE

Analysis

The primary goal of alternative C with respect to boating recreation is to freeze the amount of total boating in the riverway at current levels and to minimize user conflicts through boating regulations. Impacts are evaluated for each river segment.

Backwaters from the Dalles of the St. Croix to William O'Brien State Park: 16 miles. The natural waters classification for this segment would be identical to the existing no-wake designation. The impact of alternative C would be the same as the no-action alternative, which would be to maintain the quiet and little-used character of the recreational experience.

Backwaters from William O'Brien State Park to Arcola Sandbar: 6 miles. The natural waters classification for this segment would be identical to the existing no-wake designation; the impact of alternative C would be the same as the no-action alternative.

Backwaters from Arcola Sandbar to north limits of Stillwater: 5 miles. The natural waters classification for this segment would be identical to the existing no-wake designation; the impact of alternative C would be the same as the no-action alternative.

Dalles of the St. Croix to Rock Island: 3.5 miles. The quiet waters classification for this segment would be identical to the existing slow speed zone designation. The impact of alternative C would be the same as the no-action alternative, which would be to maintain the slow speeds, low noise levels, and the more social experience associated with relatively large numbers of canoers.

Rock Island to McLeod's Slough: 10 miles. The quiet waters classification for this segment would be identical to the existing slow speed zone designation. The impact of Alternative C would be the same as the no-action alternative.

McLeod's Slough to Arcola Sandbar: 8.5 miles. The quiet waters classification for this segment would be identical to the existing slow speed zone designation; the impact of alternative C would be the same as the no-action alternative.

Arcola Sandbar to north limits of Stillwater: 5 miles. The moderate recreation classification for this segment would involve a speed limit and a possible restriction on waterskiing. This is slightly different that the current rule, which involves no speed limit but a firm restriction on summer weekend waterskiing. Congestion in this narrow area has become a concern and the imposition of a speed limit

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would be considered a positive impact on congestion and shoreline erosion concerns.

Stillwater to Catfish Bar: 13.5 miles. The active social recreation classification for this segment would allow extremely high-speed boating to continue, although speed limits might be set in certain areas. The existing no-wake zones in the Hudson area would remain under alternative C. The concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment would continue.

Catfish Bar to Prescott: 11.5 miles. The active social recreation classification for this segment would allow extremely high-speed boating to continue, although speed limits might be set in certain areas. The existing no-wake zones in the Catfish Bar and Kinnickinnic State Park areas would remain under alternative C. The concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment would continue.

Camping Experience. A camping management plan would be developed for boat-related camping north of Stillwater that would impose gradually increased restrictions on camping. This would result in fewer boat-in campsites than currently exist, enhancing privacy and reducing shoreline erosion problems. However, the opportunity for more social camping and overall number of camping occasions would be reduced, displacing some campers to another resource. At Hudson, campers without on-board toilets would be displaced. The outcome would be reduced shoreline erosion between the Arcola Sandbar and Stillwater and reduced water quality problems there and at Hudson, but an increase in displaced recreational users.

Conclusion

Overall, alternative C would have minor positive impacts on recreational use. The existing diversity of boating opportunities would remain, however, safety concerns would continue where extremely high-speed boating activities occurred occasionally south of Stillwater.

IMPACTS ON NATURAL RESOURCES

Water Quality

Analysis. Slower boat speed limits would, to some extent, reduce the amount of shoreline erosion that occurs as a result of boat wakes. The area between the Arcola sandbar and Stillwater is the focus of much concern about wake-induced shoreline erosion, and the proposed moderate speed limit there would likely do little to alter current impacts.

Overall boating totals are expected to remain unchanged under alternative C, so water quality impacts from petroleum products or day-use boaters who do not use proper toilet facilities would be less than the no-action alternative. Additional restrictions on camping north of Stillwater and at Hudson would have a slight positive impact on water quality as compared to the no-action alternative. There would be a slight decrease in total residential development in areas not served by public sewer, leading to slightly less risk of water quality impacts from failed on-site waste treatment systems (as compared to the no-action alternative).

River crossings would be affected the same way under alternative C as described under alternative B. There could be some bridge and utility line replacements, which could have short term adverse effects on water quality, although mitigation measures should minimize these impacts. (More detailed environmental documents would be prepared before a bridge or a utility line replacement would be approved.)

Conclusion. With use levels being frozen, the potential for pollution due to user activities would remain the same as now. Additional restrictions on camping north of Stillwater and at Hudson would have a slight positive impact on water quality. Some short-term impacts could be caused by bridges or utility line replacements. From a riverwide perspective, it is expected that pollution due to construction of potential developments would be short term, while pollution due to users would be diluted and dispersed. Compared to current conditions, alternative C would likely have a minor, positive, long-term impact on the riverway's overall water quality.

Soils

Analysis. As under the no-action alternative, additional development could occur, including residential development in rural areas. Consequently, some soils would still be lost to development, although new soil disturbance would likely be reduced in the park and natural management areas (43% of the lower riverway) where less development and more restrictive land use regulations would be employed.

Shoreline erosion caused by boat wakes would be similar to the no-action alternative. The imposition of speed limits from the Arcola sandbar south would have a negligible impact on shoreline erosion caused by boat wakes.

Shoreline erosion, soil compaction, and the formation of social trails from campers would be slightly reduced, as compared to the no-action alternative, by limitations and overall reductions in camping north of Stillwater. Localized bluff erosion from foot trails would be about the same as the no-action alternative.

Only a few areas would be affected by bridge and utility line replacements during the life of this plan. It is expected that mitigation measures would keep impacts localized and minor to moderate in magnitude. (Additional environmental documentation, with mitigation measures, would be required before these crossings would be approved.) Because bridge and utility line replacements would only be permitted in existing corridors, additional soil disturbance would be limited to areas that likely have already been altered.

If the Army Corps of Engineers needed to do some dredging at the Kinnickinnic Narrows, this alternative would reduce the amount of dredged material that would need to be removed and disposed. If the dredged material could be reused for other purposes, soil in the riverway or nearby would not be altered by the disposal of the material. (The 1997 *Channel Maintenance Management Plan* directs that dredged material from the Kinnickinnic Narrows be

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placed on the delta at Kinnickinnic State park for beach nourishment.)

Conclusion. With a freeze on use levels, alternative C would have a lower potential for impacts on soils than the previous alternatives. Shoreline and bluff erosion would continue from recreational use, but would be less in areas used by campers. This would have negligible to minor long-term positive impacts on soils in localized areas, particularly on riverbanks and the islands. Additional soil loss and disturbance would be expected from new development on some private lands. However, the land use management area allocation would be beneficial, minimizing potential soil disturbance and loss on a large portion of the riverway. From an overall riverway perspective, compared to current conditions, alternative C would likely have a negligible to minor positive impact.

Vegetation

Analysis. Alternative C would have the same beneficial and negative impacts described under alternative B. The alternative would have a beneficial effect in minimizing the loss of vegetation due to new development in the park and natural zones (43% of the riverway in alternative B). Alternative C also would have a minor positive effect on plant communities if the Wisconsin Department of Natural Resources proposed amendment to the state land use standards within the riverway is adopted.

Both alternative C and the preferred alternative would have the same effects on vegetation due to bridge/utility line replacements and dredging. Little additional vegetation would be lost or disturbed due to bridge and utility line replacements, and this disturbance probably would be limited to areas that already have been altered. If dredging occurred between Stillwater and Prescott, alternative C would reduce the amount of vegetation that would be lost due to the deposition of dredged material. However, unlike the previous action alternatives, alternative C would not allow additional submarine crossings. This would prevent potential impacts on vegetation due to the construction of new pipelines near the riverbanks.

Alternative C would have the same type of impacts as the preferred alternative due to motorboat use. Boat wakes are believed to be affecting vegetation along the shoreline and islands, and this impact would continue, particularly in heavily used stretches and/or stretches that high-speed boats use. Imposition of moderate speed limits from Arcola sandbar south would a have negligible positive impact on shoreline erosion.

Users would continue to trample vegetation in localized areas when they picnic on the shoreline and islands and camp on the islands south of Stillwater (i.e., the Hudson islands). Some users probably would continue to damage trees, stripping bark from birch trees, cutting saplings, and pulling down branches for firewood. Disturbance of soils also would increase the likelihood of exotic plants like spotted knapweed and purple loosestrife becoming established. However, alternative C should have a beneficial effect on the islands and public shorelines north of Stillwater, reducing the loss of vegetation, due to increased restrictions on camping. Limiting camping in areas to designated sites would be expected to reduce the extent of vegetation disturbance and encourage native plants to become reestablished (although day users still could trample vegetation and introduce exotics).

Conclusion. Like the other action alternatives, alternative C would have both negative and beneficial effects on the riverway's vegetation. Vegetative communities would continue to be altered and lost due to the activities of users and new developments in the riverway. Some minor vegetation loss also would occur if bridge or transmission line replacements were built. On the other hand, the land management area allocation would have a beneficial effect, helping ensure the protection of vegetation on a large portion of the lower riverway. Efforts to maintain significant plant communities as well as restrictions on camping would also have a positive effect on the riverway vegetation.

From an overall perspective, most of the riverway's vegetation would not be affected by users, new developments, or the management agencies. Compared to the current situation, alternative C would be expected to have a negligible to minor, long-term, positive impact on the riverway's vegetation.

Fish and Wildlife

Analysis. Impacts on wildlife would not be significantly different for Alternative C than the no-action alternative. Most of the lower riverway management actions in this alternative would continue to promote the protection of fish and wildlife populations and habitats. No actions would be taken that would adversely affect areas known to be of special importance for breeding, nesting, foraging, or wintering.

Rural home development creates patches that disrupt the movement of some wildlife, especially those most sensitive to human activity. There would be slightly less new rural home development under Alternative C as compared to the no-action alternative, but the differences in wildlife impacts would not likely be measurable, especially considering much of the rural home development that could occur in the riverway has already been built.

Many of the lower riverway's wildlife populations and habitats have already been affected in varying degrees by recreational users and nearby developments. Some individual animals might be disturbed or temporarily displaced by the sounds of more motorboats and groups floating down the river, but this is not expected to substantially affect the lower riverway's fish and wildlife populations.

Conclusion. Impacts on fish and wildlife populations would be expected to be negligible to minor.

Threatened and Endangered Species

Analysis. The potential for recreational impacts is not expected to change with the freeze in use levels and continued use of mitigation as necessary. This alternative would maintain the diversity of plant communities on federal and state lands, and encourage private landowners to do likewise, which could benefit species like the Karner blue butterfly. A slight reduction in new rural home development could decrease the potential for impacts to some threatened and endangered species.

Overall, this alternative would not likely adversely affect threatened and endangered species (with the possible exception of certain mussel species).

There is the potential in alternative C that the federally listed Higgins' eye and winged mapleleaf mussels could be adversely affected as described in the previous alternatives. However, it is not known how the Higgins' eye and winged mapleleaf mussel populations would be affected — recreational uses would likely "take" individual mussels, which may be adversely affecting these species. It is not known if freezing use at current levels would affect this.

The same goals, strategies, or actions to support protection and recovery of these species described in alternative B would be applied under alternative C (see "Management Directions Common to All Alternatives" section). The managing agencies would also implement their respective components of the U.S. Fish and Wildlife's recovery plans for the winged mapleleaf mussel and the Higgins' eye mussel. These components address a wide variety of tasks, including actions to minimize human disturbance and destruction to the federally listed mussels, such as quantification of the magnitude of potential treats (harvesting, swimming, wading, digging, small recreational watercraft, and commercial paddlewheel watercraft) and identification of specific geographic locations of greatest concern; posting of educational signs; conduction of educational programs; and review of paddleboat operations to minimize boat operation impacts.

Conclusion. The expected uses, user numbers, and developments under alternative C are not likely to adversely affect most federal and state listed species in the lower riverway (with adequate surveys, consultation with the U.S. Fish and Wildlife Service and state biologists, and the application of appropriate mitigation measures). With regard to the federally endangered Higgins' eye and winged mapleleaf mussel populations, there are indications that recreational activities already may be adversely affecting the populations on the lower St. Croix. In particular, existing use levels near Hudson and in the Interstate Park area (where the mussels primarily occur) may be affecting these populations. Freezing existing use levels may not change the impacts that are occurring. Thus, formal consultations would still need to be initiated with the U.S. Fish and Wildlife Service to determine what actions need to be taken to ensure the conservation of the two mussel species.

IMPACTS ON CULTURAL RESOURCES

Analysis

This alternative would focus on maintaining the current visual qualities of the riverway. Maintaining the landscape's visual qualities would pose no adverse impacts for the cultural resources in the riverway. Alternative C would require local governments in the river town and small town historic districts to develop ordinances protecting historic structures and requiring new development to be consistent with the historic character of those communities. As a result, alternative

C would result in minor improvements in protection of cultural resources.

Archeological resources would be at a lower risk due to increased restrictions on areas within the portion of the riverway that is visible from the river. Minor restrictions placed on camping would be used to protect sensitive archeological sites.

The number, significance, and condition of the riverway's cultural landscapes currently is unknown. However, this alternative would pose no adverse impacts on any significant cultural or historic landscapes that may later be identified in the riverway. Maintaining the riverway's visual qualities by restricting development would minimize impacts on the riverway's cultural landscapes. The completion of the cultural landscape inventory would enhance future planning efforts to protect these resources.

Conclusion. Cultural resources would be at minimal risk under this alternative because of the emphasis on maintaining the riverway's 1997 visual qualities. Additionally, this alternative would result in minor improvements in protection of cultural resources in the river town and small town historic districts. Archeological resources would face minimal risks due to restrictions on development. Restriction on development would help safeguard any significant cultural landscapes that might be identified in the cultural landscape inventory.

IMPACTS ON SOCIOECONOMIC ENVIRONMENT

Local Economy

Analysis. There would be little direct economic impact because no additional large expenditures by the states or by the Park Service is proposed. Application of the land management areas would not result in greatly different restrictions on new development for most areas within the riverway. Placement of the new land management categories would be similar to the existing incorporated and unincorporated classifications. Exceptions to this would be areas designated as natural where increased restrictions would likely occur (although development could still occur) and in towns where some restrictions would be reduced (but with historic structure protection). Consequently, limited additional negligible to minor impacts on the long-term property tax base of the local communities due to restrictions on new development would occur. Existing positive effects on local economy from expenditures from tourists and other recreationists would continue, but would not be appreciably changed.

Conclusion. Positive impacts to the local economy would be negligible to minor compared to the no-action alternative.

Tourism

Analysis. Tourism in the St. Croix Valley is partially linked to the area's historic character. In that context, alternative C's emphasis on historic structure protection and enhancement of the historic character of valley communities would have a minor positive impact on tourism. Boating-related tourism would not be permitted to increase, possibly offsetting the minor positive impact noted above.

Conclusion. There would be some negligible to minor positive effects on tourism, that may possibly be offset by precluding any increase in boating-related tourism.

Land Values

Analysis. Land values would not be impacted by Alternative C. Local property values have probably been and would likely continue to be beneficially affected by the presence of the riverway as under the no-action alternative.

Conclusion. There would be no new impacts on land values.

Landownership/Landowners

Analysis. Alternative C proposes a modest increase in scenic easement acquisition by the two states; National Park Service acquisition is essentially complete and would not change. As a result, alternative C would have negligible impact on land ownership.

In general under alternative C, land use regulations would be slightly more restrictive in rural areas than under the no-action alternative, considering much of the rural home development that could occur has already been built. Thus, alternative C could affect some landowners in a manner that would have a minor to moderate impact on flexibility in developing their property when compared to the no action alternative.

There would be a minor to moderate beneficial impact for local landowners in some areas of the riverway due to a reduction in conflicts with recreational users and some shoreline erosion, particularly in popular camping areas north of Stillwater.

Conclusion. There would be negligible impacts on landownership. Some landowners would benefit from reduced restrictions on property improvements, although there would be constraints on new development to maintain historic character. Some landowners would be negatively affected by restrictions on new development or improvements in areas outside of towns. There would also be minor to moderate benefits to landowners from a reduction in conflicts and some shoreline erosion associated with recreational use in some areas of the riverway.

CUMULATIVE EFFECTS

The entire viewshed of the riverway as seen from the river would not be encompassed within the riverway boundaries, therefore, visual encroachments outside the boundary have the potential to impact the scenic resources of the riverway. In the federal zone, the high bluffs, the rural character, the predominance of protected areas along this section of the river, the primarily unincorporated zoning, and the fact that the viewshed outside the boundary would be less than the state-administered zone would mean that the concerns would not be as great here as in the state-administered zone. In this zone more of the viewshed would be outside the riverway boundary, the area would have a series of benches visible from the river, there would be less high bluff areas, more of the area would be incorporated, and its proximity to the Minneapolis/St. Paul area would mean greater growth. For those areas within the viewshed, yet outside of the riverway boundary, local zoning standards would be the primary methods of controlling scenic impacts to the riverway. Mitigating methodologies such as the encouragement of the preservation and maintenance of mature vegetation, planting of additional vegetative buffering, the protection of cultural resources, and the prohibition of the construction of any more extremely visible towers within the viewshed would be beneficial to the preservation of the riverway's scenic quality. Actions taken outside the riverway boundary could have negligible to major impacts on the scenic resources of the riverway, depending on the magnitude of change. Therefore, the cumulative effects of NPS/state actions on the scenic quality of the viewshed would be negligibly to moderately beneficial, depending on the magnitude of changes to the scenic resources outside the riverway boundary.

As described under the preferred alternative, impacts from recreational use within the riverway and managing agency actions would contribute incrementally to impacts from land use changes and population growth in the watershed and region. Overall, the land use management allocation and special native plant community protection would contribute to a minor to moderate positive cumulative impact within the riverway and watershed.

None of the management actions are expected to add substantively to the cumulative effects on cultural resources. Growth and land use changes could affect cultural resources adjacent to or within the viewshed of the riverway. The cumulative effects of the management actions would help mitigate the effects of population growth and development.

Many communities and counties in Minnesota and Wisconsin are in the process of revising their comprehensive plans and related ordinances. Some of these revised plans and ordinances may include land use and development provisions applicable to the river corridor that would go beyond guidance provided in this document.

The economic and population growth in the region is expected to continue. The relatively small number of jobs and expenditures on management of the riverway would only have a minor effect on the expected growth of the total economy of the region. Therefore, there would be no appreciable socioeconomic cumulative impacts from implementation of this alternative occurring in conjunction with the region's expected overall population and economy of the region.

RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The proposed management area allocation, restrictions on island, shoreline, and boating use, along with the proposed inventory, monitoring, and research programs for the riverway would contribute to the long-term protection and preservation of resources and scenic

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character of the landscape. The maintenance and restoration of native plant communities would also enhance long-term productivity of natural communities.

UNAVOIDABLE ADVERSE EFFECTS

Some minor to locally moderate adverse impacts to natural resources would occur. In the process of resolving conflicts among different uses or reducing resource impacts, restrictions would be placed on particular uses, having an adverse effect on some users. To meet the scenic and resource protection purposes of the riverway development restrictions on local landowner would implemented. To meet the recreational purposes of the riverway, some conflicts between local landowners and recreational users would continue.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Some new residential and commercial development would likely continue to occur on private lands within the riverway boundary, particularly in the existing municipalities. Potentially, new river crossing and navigation channel maintenance may also occur. It is expected that this new development would result in the long-term localized loss of vegetation, soils, and wildlife habitat.

Any action that led to the loss of individual federally listed mussel species or their habitat would contribute to the loss of the species as an ecological and genetic resource. It is possible that this alternative would contribute to their decline. However, it is expected that the implementation of actions outlined in the recovery plans for these species would avoid this situation and contribute to their conservation.

IMPACTS ON SCENIC RESOURCES

Analysis

Scenic resources in the riverway are protected primarily through land acquisition or through regulatory controls on land development. No significant land acquisition would occur in implementing alternative D. The establishment of seven land management categories compared to two under the existing management program would provide additional scenic resource protection. More restrictions would be imposed to avoid additional development that would be visible from the river. Alternative D would restrict development outside municipalities more aggressively than other alternatives. Also, as under the previous alternatives, the riverway managing agencies would require local governments to protect the historic character of municipalities, which would reduce potential impacts to scenic values in municipalities from new development.

The following analysis evaluates scenic impacts created by the application of the seven land management areas on each river segment.

The Dalles of the St. Croix to Rock Island: 3.5 miles. Scenic resources within the two state parks in this river segment would continue to be protected by state ownership (as they would be under the no-action alternative). No impact to scenic resources would occur because any future development would occur at existing development nodes, and scenic and relatively undisturbed natural areas would be maintained. Private lands in Minnesota in the southern portion of this segment would be classified as minimally disturbed and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Osceola Area (Rock Island to McLeod Slough): 10 miles. Osceola itself is classified as small town, which would afford an increase level of scenic protection compared to the existing urban standard to minimize new development visible from the river. Most of this segment would be classified as minimally disturbed, however, and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Marine Area (McLeod Slough to Arcola Sandbar via Page's Slough): 8.5 miles. Marine on St. Croix itself is classified as small town historic, which afford an increased level of scenic protection compared to the existing urban standard. Additional restrictions would be placed on development to minimize it being visible from the river and also to protect historic character. William O'Brien State Park would receive the same high level of scenic resource protection as compared to the no-action alternative. Most of the remainder of this segment in Minnesota would be classified as rural residential and

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would receive increased protection as compared to the rural classification under the no-action alternative. The Wisconsin side of the river would be classified as minimally disturbed and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Rice Lake Flats (Dead Man's Slough to Arcola Sandbar via St. Croix Islands Wildlife Area): 2.5 miles. St. Croix Islands Wildlife Area is owned by Wisconsin DNR and would receive the same high level of scenic resource protection as compared to the no-action alternative, which would maintain the undisturbed natural appearance. The remainder of this segment would be classified as minimally disturbed and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but there would be fewer new structures and those structures would not be visible from the river. Consequently, they would have no impact on scenic resources.

Arcola Gorge (Arcola Sandbar to Head of Lake St. Croix): 5 miles. The Minnesota side of the river in this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have no impact on scenic resources. The Wisconsin side of the river would mostly be classified as minimally disturbed and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have no impact on scenic resources. A small portion of the southern part of this segment in Wisconsin would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have no impact on scenic resources.

Urban Stillwater (Head of Lake St. Croix to Stillwater Downtown Courtesy Docks): 2 miles. The northern portion of this segment in Minnesota is not intensively developed; it would be classified as small town with the result that its level of scenic protection would be increased compared to the current urban classification. The central portion just north of downtown would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have no impact on scenic resources. The southern portion of this segment includes the heavily developed downtown Stillwater area; it would be classified as river town, and additional restrictions would be placed to minimize new development being visible from the river. In addition, this alternative would require protection of historic character that would reduce potential scenic impacts.

The Wisconsin side would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative.

Additional development could still occur, but new structures would have no impact on scenic resources.

South Stillwater-Bayport Area (Stillwater Downtown Courtesy Docks to Andersen Point): 3 miles. Most of this segment in Minnesota would be classified as river town and additional restrictions would be placed to minimize new development being visible from the river. In addition, this alternative would require protection of historic character that would reduce potential scenic impacts. The Andersen Point area would be classified as small town, with the result that its level of scenic protection would be increased compared to the current urban classification. The Wisconsin side would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have less impact on scenic resources than the no-action alternative.

Bayport-North Hudson Area (Andersen Point to Willow River Dam): 2 miles. In Minnesota, the area between Andersen Point and the south limits of Bayport would be classified as small town, with the result that its level of scenic protection would be increased compared to the current urban classification. The southern portion of this segment in Minnesota would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would not impact scenic resources. Most of the Wisconsin side would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have not impact scenic resources. The southern portion of this segment in Wisconsin lies in North Hudson and would be classified as small town, with the result that its level of scenic protection would be increased compared to the current urban classification.

Urban Hudson (Willow River Dam to Interstate 94): 2 miles. The Minnesota side in this segment would be primarily classified as small town, with the level of scenic protection increased compared to the current urban classification. The Wisconsin side would be classified as river town and additional restrictions would be placed to minimize new development being visible from the river. In addition, this alternative would require protection of historic character that would reduce potential scenic impacts.

Open Lake (Interstate 94 to Catfish Bar): 4.5 miles. The Minnesota side in this segment would be classified as small town, with the result that its level of scenic protection would be increased compared to the current urban classification. The southern portion of Hudson would also be classified as small town. The remainder of this segment in Wisconsin would be classified as rural residential, which affords an increased level of protection compared to the rural classification under the no-action alternative.

Catfish to Kinnickinnic (Catfish Bar to Kinnickinnic Narrows): 5 miles. In Minnesota the old Afton village area would be classified as small town historic, with the result that its level of scenic protection would be increased compared to the current urban classification. The

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southern portion of Afton would be classified as rural residential and would receive an increased level of protection compared to the rural classification under the no-action alternative. Afton State Park would receive the same high level of scenic resource protection as compared to the no-action alternative. The area south of Afton State Park in Minnesota and all of the Wisconsin side in this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have no impact on scenic resources.

Kinnickinnic Narrows: 0.5 miles. The Minnesota side of the river in this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have no impact on scenic resources. Kinnickinnic State Park in Wisconsin would receive the same high level of scenic resource protection as compared to the no-action alternative.

Kinnickinnic to Prescott (Kinnickinnic Narrows to Mississippi Confluence at Prescott): 6 miles. Much of the Minnesota side of the river in this segment would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. Additional development could still occur, but new structures would have no impact on scenic resources. St. Croix Bluffs Regional Park would receive the same high level of scenic resource protection as compared to the no-action alternative. Carpenter Nature Center would be classified as natural and would receive increased protection as compared to the rural classification under the no-action alternative. There would be small areas north and south of Carpenter Nature Center that would be classified as rural residential, which affords an increased level of protection compared to the no-action alternative. In Wisconsin, the area north of Prescott would be classified as rural residential, which affords an increased level of protection compared to the no-action alternative. Prescott would be classified as river town and additional restrictions would be placed to minimize new development being visible from the river. In addition, this alternative would require protection of historic character that would reduce potential scenic impacts.

By encouraging the maintenance and restoration of natural diversity and ecological integrity of plant communities through a variety of actions, the visual landscape of the riverway would become more representative of the native ecotones of the area. These provisions would have a long-term beneficial impact on the visual resources of the riverway by preserving and enhancing indigenous vegetation. However, these impacts would be minor to negligible because these actions would be voluntary, and most individuals would consider these areas as a natural landscapes whether the vegetative mosaics included a diversity of significant plant communities or not.

An amendment to the Wisconsin managed forest law (Chapter NR 118) would be pursued which would result in a long term minor beneficial impact for the scenic resources of the river ay by providing landowners with more flexibility to preserve these resources.

Continued adherence to NPS policies which perpetuate native plant communities would result in a long term minor beneficial impact to the scenic resources.

This alternative would result in the least impacts to scenic resources related to river crossings because its goal is to reduce the visual impacts of structures that cross the riverway. By encouraging a reduction in the utility lines, restricting road, railroad bridges, utility lines, and submarine lines to existing corridors, and not allowing any change in scale or character of road and railroad crossings, the visual landscape of the river corridor could eventually have less visual encroachments over the river corridor than currently exist. Compared to the no-action alternative, alternative D would avoid potentially major long-term impacts to scenic quality from construction of large-scale bridge crossings or relocation of utility lines to highly scenic or largely undisturbed corridors.

Flexibility on the use of existing submarine crossings to allow for the replacement of an existing overhead transmission lines could reduce the amount of overhead visual intrusions upon the riverway landscape, however, ground disturbance and vegetation removal during installation could result in minor to negligible adverse impact to scenic resources in the immediate vicinity.

Conclusion. This alternative would result in the somewhat greater beneficial impacts to scenic resources of all the alternatives because it would put slightly more of the land within the management areas that would be most restrictive to development. Also, its goal would be to reduce the visual impacts of structures that cross the riverway, possibly resulting in less visual encroachments over the river corridor than currently exist. Like the preferred alternative, it encourages the maintenance and restoration of plant communities on both public and private lands. Overall, alternative D would have a moderate, positive impact on scenic resources compared to the no-action alternative.

IMPACTS ON RECREATIONAL USE

Analysis

The primary goal of alternative D with respect to boating recreation is to reduce total recreational use and to enhance opportunities for quieter, slower, more passive boating recreational experiences. Impacts are evaluated for each river segment.

Backwaters from the Dalles of the St. Croix to William O'Brien State Park: 16 miles. Under alternative D, this segment would be classified silent boating and internal combustion motors could not be used. This would slightly enhance the exceptionally quiet and little-used character of the recreational experience in this segment compared to the current no-wake rule. While motorboats cannot navigate this segment during normal river levels, they are occasionally found in the area during high water periods. Consequently, restrictions on use of motors would slightly decrease the flexibility of movement for some motorized watercraft but would ensure locations for boaters seeking areas free from encounters with noisier motorized watercraft.

Backwaters from William O'Brien State Park to Arcola Sandbar: 6 miles. The natural waters classification for this segment would be identical to the existing no-wake designation. The impact of alternative D would be the same as the no-action alternative, which would maintain the quiet little-used character of the recreational experience.

Backwaters from Arcola Sandbar to north limits of Stillwater: 5 miles. The quiet waters classification for this segment would permit slow-speed boating, compared to the existing no-wake designation; the impact of alternative D would be to allow moderately faster boating than the no-action alternative.

Dalles of the St. Croix to Rock Island: 3.5 miles. The quiet waters classification for this segment would be identical to the existing slow-speed zone designation. The impact of alternative D would be the same as the no-action alternative, which would be to maintain the slow speeds, low noise levels, and the more social experience associated with relatively large numbers of canoers.

Rock Island to McLeod's Slough: 10 miles. The natural waters classification for this segment would provide for a no-wake designation, which is more restrictive than the existing slow speed zone designation; the impact of alternative D would be a reduction in boat speed in this area compared to the no-action alternative.

McLeod's Slough to Arcola Sandbar: 8.5 miles. The quiet waters classification for this segment would be identical to the existing slow speed zone designation; the impact of alternative D would be the same as the no-action alternative. Opportunities would be maintained for a mixture of non-motorized and slow-moving motorized craft.

Arcola Sandbar to north limits of Stillwater: 5 miles. The quiet waters classification for this segment would result in a slow speed designation; under the no-action alternative there would be no speed limit, but there would be a restriction on weekend waterskiing. Congestion in this narrow area has become a concern and the imposition of a slow speed designation would be considered a positive impact on congestion and shoreline erosion concerns.

Stillwater to Catfish Bar: 13.5 miles. The moderate recreation classification for this segment would involve a speed limit and a possible restriction on waterskiing; under the no-action alternative there would be no speed limit. The existing no-wake zones in the Hudson area would remain under alternative D. There has been growing concern about safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment; that would be eliminated under alternative D, forcing boaters who want to travel at those speeds to use a different resource. The imposition of a speed limit in this area would be considered a minor positive impact on the environment.

Catfish Bar to Prescott: 11.5 miles. The moderate recreation classification for this segment would involve a speed limit and a possible restriction on waterskiing; under the no-action alternative there would be no speed limit. The existing no-wake zones in the Catfish Bar and Kinnickinnic State Park areas would remain under alternative D. There has been growing concern about

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safety factors surrounding extremely high-speed boating (80 mph and greater) that occasionally occurs in this segment. This would be eliminated under alternative D, forcing boaters who want to travel at those speeds to use a different resource. The imposition of a speed limit in this area would be considered a minor positive impact on the environment.

Camping Experience. A camping management plan would be developed for boat-related camping north of Stillwater that would impose gradually increased restrictions on camping. This would result in fewer boat-in campsites than currently exist, enhancing privacy and reducing shoreline erosion problems, but reducing the opportunity for more social camping situations and reducing the overall number of camping occasions, displacing some campers to another resource. At Hudson, campers without on-board toilets would be displaced. The outcome would be reduced shoreline erosion between the Arcola sandbar and Stillwater and reduced water quality problems there and at Hudson, but an increase in displaced recreational users.

Conclusion

Overall boating use of the riverway would be reduced under Alternative D, while additional water surface use regulations would be imposed to preserve slower recreational uses and to reduce boat speeds in significant sections of the river. The existing diversity of boating opportunities would be reduced. Overall, alternative D would provide minor positive impacts on slower recreational uses, while reducing recreational boating diversity.

IMPACTS ON NATURAL RESOURCES

Water Quality

Analysis. Overall boating totals are expected to decrease slightly under alternative D, so water quality impacts from petroleum products or day-use boaters who do not use proper toilet facilities would be slightly lower than the no-action alternative. Additional restrictions on camping north of Stillwater and at Hudson would have a slight positive impact on water quality as compared to the no-action alternative. There would be a slight decrease in total residential development in areas not served by public sewer, leading to slightly less risk of water quality impacts from failed on-site waste treatment systems (as compared to the no-action alternative).

With regard to river crossings, the impacts of alternative D would be identical with alternatives B and C. There could be some bridge and utility line replacements, which could have short term adverse effects on water quality; however, mitigation measures should minimize these impacts. (More detailed environmental documents would be prepared before a bridge or a transmission line replacement would be approved.)

Conclusion. With use levels being lowered, the potential for pollution due to user activities should decrease. Some short-term impacts could occur if bridges or utility lines were replaced. From a riverwide perspective, it is expected that pollution due to construction of potential developments would be short term, while pollution due to users would be diluted and dispersed. Overall, alternative D would be expected to have a minor to moderate,

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positive, long-term impact on the riverway's overall water quality compared to current conditions.

Soils

Analysis. As under the no-action alternative, additional development could occur, including residential development in rural areas. Consequently, some soils would still be lost to development, although new soil disturbance would likely be reduced in the park, minimally disturbed, and natural management areas (58% of the lower riverway) where less development and more restrictive land use regulations would be employed.

With motorboat use levels and speeds being decreased, the potential for soils being eroded along the river's banks and islands should be reduced. Some riverbanks would continue to be undercut and some erosion due to motorboat wakes would continue, but the magnitude of this impact would be the lowest of all the alternatives being considered.

Shoreline erosion, soil compaction, and the formation of social trails from campers would be slightly reduced as compared to the no-action alternative by limitations and overall reductions in camping. Localized bluff erosion from foot trails would be about the same as the no-action alternative.

Alternative D would have the same effects as alternatives B and C with regard to river crossings. There could be some bridge and utility line replacements under this alternative, but any soil disturbance would be limited to areas in existing corridors that likely have already been altered. (Additional environmental documentation, with mitigation measures, would be required before these crossings would be approved.) Alternative D also would prevent soil disturbance that could be caused by new submarine crossings.

If the Army Corps of Engineers needed to do some dredging at the Kinnickinnic Narrows, this alternative would reduce the amount of dredged material that would need to be removed and disposed. If the dredged material could be reused for other purposes, soil in the riverway or nearby would not be altered by the disposal of the material. (The 1997 *Channel Maintenance Management Plan* directs that dredged material from the Kinnickinnic Narrows be placed on the delta at Kinnickinnic State park for beach nourishment.)

Conclusion. Shoreline erosion caused by boat wakes would be moderately less than the no-action alternative. Soil erosion and compaction from campers should also be reduced in localized areas, particularly on riverbanks and the islands. There is the potential for soil loss and disturbance due to new developments on private lands and from bridge replacements. However, the management area allocation would help minimize potential soil disturbance and loss on a large portion of the lower riverway. From an overall perspective, compared to present conditions, alternative D would have a minor to moderate, positive effect on the soils in the lower riverway.

Vegetation

Analysis. The alternative would have a beneficial effect in minimizing the loss of vegetation due to new development in the minimally disturbed, park and natural land management areas (58% of the riverway). Alternative D also would have a minor positive effect on plant communities if the Wisconsin Department of Natural Resources proposed amendment to the state land use standards within the riverway is adopted.

Very little additional vegetation would be lost or disturbed due to bridge and utility line replacements, and this disturbance would be limited to areas that already have been altered. If dredging occurred at the Kinnickinnic Narrows, alternative D would reduce the amount of vegetation that would be lost due to the deposition of dredged material. Alternative D also would not allow additional submarine crossings, which would prevent potential impacts on vegetation.

Some vegetation would continue to be affected in areas where users picnic or camp on the shoreline and islands, with vegetation being trampled, harvested, and cut for firewood. Any disturbance of soils also would increase the likelihood of exotic plants like spotted knapweed and purple loosestrife becoming established.

However, with a reduction in use levels, impacts from motorboat use and use of the shoreline and islands would be reduced.

Conclusion. Some vegetative communities would continue to be altered and lost due to the activities of users and new developments in the riverway. But with use levels being decreased, potential future impacts would be reduced. The land management areas also would have a beneficial effect, helping ensure the protection of vegetation on a large portion of the lower riverway. Some minor vegetation loss also would occur if bridge or transmission line replacements were built. Efforts to maintain and restore significant plant communities on public and private lands also would have a positive effect on the riverway vegetation. From an overall perspective, most of the riverway's vegetation would not be affected by users, new developments, or the management agencies, and efforts would be made to restore native plant communities. Thus, compared to current conditions, alternative D would be expected to have a moderate, beneficial, long-term impact on the riverway's vegetation.

Fish and Wildlife

Analysis. Impacts on wildlife would not be significantly different for alternative D than the no-action alternative. Most of the lower riverway management actions in this alternative would continue to promote the protection of fish and wildlife populations and habitats. No actions would be taken that would adversely affect areas known to be of special importance for breeding, nesting, foraging, or wintering.

Rural home development creates patches that disrupt the movement of some wildlife, especially those most sensitive to human activity. There would be slightly less new rural home development under alternative D as compared to the no-action alternative, but the differences in terms of wildlife impacts would likely not be measurable, especially considering much of the rural home development that could occur in the riverway has already been built.

Many of the lower riverway's wildlife populations and habitats have already been affected in varying degrees by recreational users and nearby developments. Some individual animals might be disturbed or temporarily displaced by the sounds of more motorboats and groups floating down the river, but this is not expected to substantially affect the lower riverway's fish and wildlife populations.

Conclusion. Impacts on fish and wildlife populations would be expected to be negligible to minor.

Threatened and Endangered Species

Analysis. Reductions in use levels would not be expected to affect listed species and their habitats. Alternative D would maintain and restore significant plant communities on federal and state lands, and encourage private landowners to do likewise, which could benefit species like the Karner blue butterfly. A slight reduction in new rural home development could decrease the potential for impacts to some threatened and endangered species.

Like all of the alternatives, there is the potential in alternative D that the federally listed Higgins' eye and winged mapleleaf mussels could be adversely affected in the following ways: People could inadvertently introduce zebra mussels into the lower riverway; mussels could be scraped off boats in shallow waters or by beached boats; boats could increase shoreline erosion and sediments in the water (which could affect filter-feeding mussels); waders and swimmers could unknowingly collect mussels and use them for fishing or other purposes, and poachers could adversely affect the mussels. These activities have occurred, or are occurring, on the lower St. Croix. Although alternative D would decrease use levels, it is not known how much of an impact this would have on the Higgins' eye and winged mapleleaf mussel populations — even with lower use levels, recreational users may continue to "take" individual mussels, which may adversely affecting these species.

The following goals, strategies, or actions support the protection and recovery of these species: protection and improvement of water quality, development of a public information/education program that includes mussels, development of means to improve mussel information/coordination among various agencies, organizations, etc., continued enforcement of regulations prohibiting harvesting or taking of mussels, and implementation of the zebra mussel action plan (see "Management Directions Common to All Alternatives" section). The managing agencies would also implement their respective components of the U.S. Fish and Wildlife's recovery plans for the winged mapleleaf mussel and the Higgins' eye mussel. These components address a wide variety of tasks. The tasks include actions to minimize human disturbance and destruction to the federally listed mussels, such as quantification of the magnitude of potential threats (harvesting, swimming, wading, and small recreational watercraft) and identification of specific geographic locations of greatest concern; posting of educational signs; presentation of educational programs; and review of paddleboat operations to minimize boat operation impacts.

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Conclusion. The expected uses, user numbers, and developments under alternative D would not likely adversely affect most federal and state listed species in the lower riverway (assuming adequate surveys, consultation with the U.S. Fish and Wildlife Service and state biologists, and the application of appropriate mitigation measures). Recreational activities could adversely affect the federally endangered Higgins' eye and winged mapleleaf mussel populations on the lower St. Croix. In particular, even with reductions in user numbers, boaters near Hudson and in the Interstate Park area (where the mussels primarily occur) might affect these populations. Formal consultations would still need to be initiated with the U.S. Fish and Wildlife Service to determine what other actions need to be taken to ensure the conservation of the two mussel species.

IMPACTS ON CULTURAL RESOURCES

Analysis

Archeological resources and any cultural landscapes in the riverway that might be identified in the future would face no adverse impacts under this alternative, due to greater restrictions on new development. Minor restrictions placed on camping would be used to protect sensitive archeological sites. Alternative D would require local governments in the river town and small town historic districts to develop ordinances protecting historic structures and requiring new development to be consistent with the historic character of those communities. As a result, alternative D would result in minor improvements in protection of cultural resources.

Conclusion

Cultural resources would be at minimal risk under this alternative. Additionally, this alternative would result in minor improvements in protection of cultural resources in the river town and small town historic districts. Archeological resources would face minimal risks due to restrictions on development. Restriction on development would help safeguard any significant cultural landscapes that might be identified in the cultural landscape inventory.

IMPACTS ON SOCIOECONOMIC ENVIRONMENT

Local Economy

Analysis. There would be little direct economic impact because no additional large expenditures by the states or by the Park Service is proposed. Application of the land management areas would not result in greatly different restrictions on new development for most areas within the riverway. Exceptions to this would be areas designated as natural and minimally disturbed where increased restrictions would likely occur (although development could still occur) and in towns where some restrictions would be reduced (but with historic structure protection). Consequently, limited additional negligible to minor impacts on the long-term property tax base of the local communities due to restrictions on new development would occur. Existing positive effects on local economy from expenditures from tourists and other recreationists would continue but would not be appreciably changed. An exception to that would be the loss of economic activity associated with marinas that would be puchased and closed.

Conclusion. Impacts to the local economy would be negligible to minor compared to the no-action alternative.

Tourism

Analysis. Tourism in the St. Croix Valley is partially linked to the area's historic character. In that context, alternative D's emphasis on historic structure protection and enhancement of the historic character of valley communities would have a minor positive impact on tourism. Boating-related tourism would decrease slightly.

Conclusion. There would be some negligible to minor positive effects on tourism that might possibly be offset by a decrease in boating-related tourism.

Land Values

Analysis. Land values would not be impacted by alternative D. Local property values have probably been and would likely continue to be beneficially affected by the presence of the riverway as under the no-action alternative.

Conclusion. There would be no new impacts on land values.

Landownership/Landowners

Analysis. Alternative D proposes a modest increase in scenic easement acquisition by the two states; National Park Service acquisition is essentially complete and would not change. As a result, the alternative D would have negligible impact on landownership.

In general under alternative D, land use regulations would be slightly more restrictive than under the no-action alternative, considering much of the rural home development that could occur has already been built. Thus alternative D could affect some landowners in a manner that would have a minor to moderate impact on flexibility in developing their property when compared to the no-action alternative.

There would be a minor to moderate beneficial impact for local landowners in some areas of the riverway due to a reduction in conflicts with recreational users, particularly in popular camping areas north of Stillwater. Local landowners would also likely benefit from a reduction in the periodic loud noise generated by higher boat speeds and reduced shoreline effects from wave action.

Conclusion. There would be negligible impacts on landownership. Some landowners would benefit from reduced restrictions on property improvements, although there would be constraints on new development to maintain historic character. Some landowners would be negatively affected by restrictions on new development or improvements in areas outside of towns. There would also be minor to moderate benefits to landowners from a reduction in conflicts and shoreline erosion associated with recreational use in some areas of the riverway.

CUMULATIVE EFFECTS

The entire viewshed of the riverway as seen from the river would not be encompassed within the riverway boundaries, therefore, visual encroachments outside the boundary have the potential to impact the scenic resources of the riverway. In the federal zone, the high bluffs, the rural character, the predominance of protected areas along this section of the river, the primarily unincorporated zoning, and the fact that the viewshed outside the boundary would be less than the state-administered zone would mean that the concerns would not be as great here as in the state- administered zone. In this zone more of the viewshed would be outside the riverway boundary, the area would have a series of benches visible from the river, there would be less high bluff areas, more of the area would be incorporated, and its proximity to the Minneapolis/St. Paul area would likely mean greater growth.

For those areas within the viewshed, yet outside of the riverway boundary, local zoning standards would be the primary methods of controlling scenic impacts to the riverway. Mitigating methodologies such as the encouragement of the preservation and maintenance of mature vegetation, planting of additional vegetative buffering, the protection of cultural resources, and the prohibition of the construction of any more extremely visible towers within the viewshed would be beneficial to the preservation of the riverway's scenic quality. Actions taken outside the riverway boundary could have negligible to major impacts on the scenic resources of the riverway, depending on the magnitude of change. Therefore, the cumulative effects of NPS/state actions on the scenic quality of the viewshed would be negligibly to moderately beneficial, depending on the magnitude of changes to the scenic resources outside the riverway boundary.

Overall the land use management allocation, special plant community protection, and restoration efforts would contribute to a minor to moderate positive cumulative impact within the riverway and watershed.

None of the management actions would be expected to add substantively to the cumulative effects on cultural resources. Growth and land use changes could affect cultural resources adjacent to or within the viewshed of the riverway. The cumulative effects of the management actions would help mitigate the effects of population growth and development.

Many communities and counties in Minnesota and Wisconsin are in the process of revising their comprehensive plans and related ordinances. Some of these revised plans and ordinances might include land use and development provisions applicable to the river corridor that would go beyond guidance provided in this document.

The economic and population growth in the region is expected to continue. The relatively small number of jobs and expenditures on management of the riverway would only have a minor effect on the expected growth of the total economy of the region. Therefore, there would be no appreciable socioeconomic cumulative impacts from implementation of this alternative occurring in conjunction with the region's expected overall population and economy of the region.

RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The proposed management area allocation, restrictions on island, shoreline, and boating use, along with the proposed inventory, monitoring, and research programs for the riverway, would contribute to the long-term protection and preservation of resources and scenic character of the landscape. The maintenance and restoration of plant communities would also enhance long-term productivity of natural communities.

UNAVOIDABLE ADVERSE EFFECTS

In the process of resolving conflicts among different uses or reducing resource impacts, restrictions would be placed on particular uses, having an adverse effect on some users. In order to meet the scenic and resource protection purposes of the riverway development restrictions on local landowner would implemented. To meet the recreational purposes of the riverway, some conflicts between local landowners and recreational users would continue.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Some new residential and commercial development would likely continue to occur on private lands within the riverway boundary, particularly in the existing municipalities. Potentially, new river crossings may also occur. It is expected that this new development would result in the long-term localized loss of vegetation, soils, and wildlife habitat.

Any action that led to the loss of individual federally listed mussel species or their habitat would contribute to the loss of the species as an ecological and genetic resource. It is possible that this alternative would contribute to their decline. However, it is expected that the implementation of actions outlined in the recovery plans for these species would avoid this situation and contribute to their conservation.

IMPACTS OF ALTERNATIVE E (NO ACTION)

IMPACT ON SCENIC RESOURCES

Analysis

The use of current state and local zoning standards to limit development in urban and rural areas would ensure that future development was comparable to development that has occurred in the valley in the last 20 years. Additional development would continue, although structure size and placement would be limited to reduce visual impact.

Additional development in urban areas would result in a negligible to minor addition of visible structures. However, the character of some communities could change. The impact on scenic resources could be minor to major depending on the magnitude of change. In rural areas, considering that much of the rural home development that could occur in the riverway has already been built, expected additional development would likely have negligible to minor impacts on scenic resources.

The state of Wisconsin could elect, independent of this planning process, to amend the Wisconsin-managed forest law (chapter NR118). The consequences of this action would be considered as part of the state's established rule-making process, which would result in a long-term minor beneficial impact for scenic resources by providing landowners with more flexibility to preserve these resources.

Continued adherence to NPS policies that perpetuate native plant communities would result in a long-term minor beneficial impact to the scenic resources. (Please see the "Impacts on Natural Resources" section for additional impacts related to vegetation management.)

Restriction of the numbers and types of road and railroad bridge crossings would prevent additional visual encroachments over the river corridor. Road and railroad bridges, however, could change in scale and character. These impacts would have to be determined on a case-by-case basis and could be negligible to major, based on the magnitude and visibility of the change.

Restriction of the number, scale, or character of utility lines would also prevent additional visual encroachments over the river corridor. Utility lines, however, could be replaced or relocated provided that the existing structures were removed. These scenic impacts would have to be determined on a case-by-case basis, and their impacts could also be negligible to major, based on the magnitude of change.

Submarine corridors could change in size or the number of lines with negligible to minor adverse impacts to scenic resources in the immediate vicinity. The degree of change would depend on the extent and duration of ground disturbance and vegetation removal during installation.

Conclusion

Additional development would continue to occur, although structure size and placement would be limited to reduce visual impact. The character of some communities could change, resulting in minor to major impacts on scenic resources, depending on the magnitude of

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change. In unincorporated areas limited development would continue to be allowed and could be visible from the riverway. Road and railroad bridges could change in scale and character, and utility lines could be replaced or relocated. These actions would have a minor to major, adverse, long-term impact on the scenic resources of the riverway, depending on the magnitude of the change.

IMPACTS ON RECREATIONAL USE

Analysis

Water surface use regulations would remain in place to preserve the existing diversity of surface water recreational experiences. Overall boating use of the riverway would continue to grow slowly, if at all (existing use patterns show no clear increase in use since the mid-1980s). The existing diversity of boating opportunities would remain. Congestion problems would likely continue, primarily in the narrow section of river between the Arcola sandbar and Stillwater, in the Hudson Narrows, the Catfish Bar area, the Kinnickinnic Narrows, and the Prescott Narrows. Extremely high-speed boating would continue to be unregulated, and associated safety and noise concerns would continue in areas south of Stillwater.

There would continue to be limited regulation of camping in the riverway. The social nature of the camping experience north of Stillwater and at Hudson would not change.

Conclusion. The recreational experiences and opportunities provided by the riverway would not change. Riverway users would continue to be negatively affected to a minor to moderate extent by congested conditions or safety issues in some areas of the riverway.

IMPACTS ON NATURAL RESOURCES

Water Quality

Analysis. Water quality impacts from petroleum products or day-use boaters who do not use proper toilet facilities would continue, as would impacts from camping north of Stillwater and at Hudson. There would continue to be some new residential development in areas not served by public sewer, leading to a slight risk of water quality impacts from failed on-site waste treatment systems.

Under alternative E there could be some bridge and utility line replacements that could have short-term adverse effects on water quality, such as increased sedimentation due to the installation of new bridge piers. Mitigation measures would likely minimize these impacts. (More detailed environmental documents would be prepared before a bridge or utility line replacement would be approved.)

Conclusion. Pollution due to user activities would continue on the lower St. Croix. From a riverwide perspective, however, it is expected that pollution due to construction of developments would be short term, while pollution due to users would be transient and should have minor to negligible effects on pollutant levels.

Soils

Analysis. Under alternative E, additional development could occur. Consequently, some soils would be lost or disturbed by development. The area between the Arcola sandbar and Stillwater is the focus of much concern about wake-induced shoreline erosion; new regulations would not be imposed to address this problem. Shoreline erosion caused by boat wakes would continue to occur. Shoreline erosion from campers and bluff erosion from foot trails would also continue.

There could be some bridge and utility line replacements under alternative E, although only a few areas would likely be affected during the life of this plan. Since these replacements would only be permitted in existing corridors, additional soil disturbance would be limited to areas that likely have already been altered.

Conclusion. Under alternative E, shoreline and bluff erosion would continue from recreational use. This would have minor to moderate, negative, long-term impacts on soils in localized areas, particularly along the riverbanks and the islands. Some soil also would be lost or disturbed due to new developments in the lower riverway. From an overall perspective, the impact of alternative E would likely be minor compared to existing conditions.

Vegetation

Analysis. In this alternative no special protection would be afforded significant plant communities on non-NPS lands. This would likely result in the gradual perpetuation and expansion of closed canopy forest communities — desirable native plant species/communities, such as oak savanna communities, would likely be crowded out by invasive exotic species or more tolerant closed canopy plant species.

Motorboat use on the lower St. Croix is believed to be affecting shoreline vegetation, with boat wakes damaging plants, exposing root systems, and undercutting trees. With continued motorboat use, this impact would likely continue, particularly in heavily used stretches and/or stretches where there would be high-speed boats. In addition, users would continue to affect vegetation in localized areas; when they picnic and camp on the shoreline and islands, users deliberately and inadvertently trample plants. Some users probably would continue to damage trees, stripping bark from birch trees, cutting saplings, and pulling down branches for firewood. Disturbance of soils would increase the likelihood of exotic plants like spotted knapweed and purple loosestrife becoming established. With use not expected to increase greatly on the lower riverway, and no additional management of use on the islands and shoreline, degradation of vegetation would likely continue and result in minor to moderate, localized impacts. However, the prohibition of camping in three NPS areas north of Stillwater would likely result in a moderate beneficial effect, with plants becoming re-established in those areas.

Some new residential and commercial development would likely continue on private lands within the riverway boundary. It is expected that this new development would result in additional vegetation being lost or altered.

Conclusion. Under alternative E significant vegetative communities would continue to be altered and lost due to the activities of users and new developments in the riverway, primarily in heavily used areas on the islands and the shoreline, resulting in minor to moderate, long-term impacts. From a riverwide perspective, most of the riverway's vegetation would not be affected by users or the management agencies.

Fish and Wildlife

Analysis. Most of the lower riverway management actions in this alternative would continue to promote the protection of fish and wildlife populations and habitats. No actions would be taken that would adversely affect areas known to be of special importance for breeding, nesting, foraging, or wintering. Rural home development creates patches that disrupt the movement of some wildlife, especially those most sensitive to human activity. There would be some new rural home development under alternative E, but wildlife impacts are likely not measurable considering that much of the rural home development that could occur in the riverway has already been built.

Many of the lower riverway's wildlife populations and habitats have already been affected in varying degrees by recreational users and nearby developments. Some individual animals might be disturbed or temporarily displaced by the sounds of more motorboats and groups floating down the river, but this is not expected to substantially affect the lower riverway's fish and wildlife populations.

Conclusion. Impacts on fish and wildlife populations would be expected to be negligible to minor.

Threatened and Endangered Species

Analysis. Continued and possibly slightly higher recreational use and limited new rural home development would have the potential to affect some species that are sensitive to human disturbance, or areas that provide habitat for listed species could be altered. But with appropriate mitigation (e.g., keeping people away from nesting eagle nests) such impacts are not anticipated.

Although no Karner blue butterflies have been recorded in the lower riverway, butterflies might use open savanna areas along the river. This habitat has historically been declining along the riverway. Under the no-action alternative, there would be no additional management on public lands to prevent savannas from succeeding to closed canopy forests, and private landowners would not be encouraged to maintain savannas. Thus, there is the potential that this alternative might indirectly adversely affect the habitat of the Karner blue butterfly.

As described in the action alternatives, there is the potential that the federally listed Higgins' eye and winged mapleleaf mussels could be adversely affected, however, it is not known what effect these activities are having on the Higgins' eye and winged mapleleaf mussel populations. Recreational uses are likely "taking" individual mussels, which might be adversely affecting these species.

Measures to minimize impacts and recovery of mussels would include the following measures. Recovery of the winged mapleleaf mussel would include preservation of the sole known remnant population in the lower St. Croix River. Recovery of the Higgins' eye mussel includes preservation of the current populations and its essential habitat, which includes one site on the lower St. Croix near Hudson, Wisconsin. The *Cooperative Management Plan* identifies the following goals, strategies, or actions in support of the protection and recovery of these species: protection and improvement of water quality, development of a public information/education program that includes mussels, development of means to improve mussel information/coordination among various agencies, organizations, etc., continued enforcement of regulations prohibiting harvesting or taking of mussels, and implementation of the zebra mussel action plan (see "Management Directions Common to All Alternatives" section). The managing agencies would also implement their respective components of the U.S. Fish and Wildlife Service's recovery plans for the winged mapleleaf mussel and the Higgins' eye mussel. These components address a wide variety of tasks, including actions to minimize human disturbance and destruction to the federally listed mussels, such as harvesting, swimming, wading, digging, small recreational watercraft, and commercial paddlewheel watercraft; identification of specific geographic locations of greatest concern; posting of educational signs; conduction of educational programs; and review of paddleboat operations to minimize boat operation impacts.

Conclusion. It is believed that current users and use levels are not adversely affecting most federal and state listed species in the lower riverway, and there is no indication that these uses would adversely affect the populations in the future (assuming surveys, consultation with the U.S. Fish and Wildlife Service and state biologists, and the application of appropriate mitigation measures).

Alternative E potentially could adversely affect the Karner blue butterfly's habitat indirectly. Recreational activities could adversely affect the federally endangered Higgins' eye and winged mapleleaf mussel populations. Formal consultations would be initiated with the U.S. Fish and Wildlife Service to determine actions needed to ensure the conservation of these species.

IMPACTS ON CULTURAL RESOURCES

Analysis

Cultural resources would be at a slightly higher risk under this alternative. There would be greater potential for new residential and commercial development along the riverway. Increased development and more opportunities for camping could pose an increased risk for archeological resources.

This alternative would provide for no special actions to address the historic character of the riverway's communities. Increased development could pose some impacts on historic structures, districts, and other significant resources along the riverway.

Potential impacts on any cultural or historic landscapes include the following: allow new development that would be visible from the river; take no steps to protect the historic character of the riverway's communities; allow changes in the scale and character of railroad bridges and other bridges that would replace existing structures; and allow increases in the size and number of utility lines within existing corridors. All of these actions could pose adverse impacts on any significant cultural landscapes.

Conclusion. Cultural resources would face slightly higher risks because of the greater potential for new residential and commercial development along the riverway. Increased development and more opportunities for camping could pose greater risks of adverse impacts to archeological resources.

IMPACTS ON SOCIOECONOMIC ENVIRONMENT

Local Economy

Analysis. The no action alternative would not change the manner in which the riverway is currently being managed. Current management conditions would continue. As a result, there would be no change in the regional short- or long-term social or economic conditions related to the riverway. Existing positive effects on the local economy from expenditures from tourists and other recreationists would continue.

Conclusion. Overall effects on the regional social or economic conditions would be negligible compared to existing conditions.

Tourism

Analysis. Tourism in the St. Croix Valley is partially linked to the area's historic character. In that context, alternative E's lack of emphasis on historic structure protection and enhancement of the historic character of valley communities would not enhance tourism. The loss of historic community character could have a minor negative impact on some tourism. Boating-related tourism would increase slightly or stay the same, so impacts would be negligible.

Conclusion. There could be some minor, negative impacts on tourism.

Land Values

Analysis. Land use values would not be affected. Local property values have probably been and would likely continue to be beneficially affected by the presence of the riverway.

Landownership/Landowners

Analysis. Alternative E proposes no land acquisition by the two states; National Park Service acquisition is essentially complete and would not change. As a result, alternative E would have negligible impacts on landownership.

Landowners would still be constrained by existing restrictions on new development and land. Existing conflicts between local landowners and recreational users, particularly in the vicinity of popular camping areas north of Stillwater, and from high speed boat use would likely continue.

Shoreline erosion associated with recreational use would also continue.

Conclusion. There would be negligible impacts on landownership. Some landowners would continue to be affected by restrictions on development. Existing conflicts between local landowners and recreational users would likely continue in some areas of the riverway.

CUMULATIVE EFFECTS

The entire viewshed of the riverway as seen from the river would not be encompassed within the riverway boundaries, therefore, visual encroachments outside the boundary have the potential to impact the scenic resources of the riverway.

In the federal zone, the high bluffs, rural character, predominance of protected areas along this section of the river (primarily unincorporated zoning), and the fact that the viewshed outside the boundary would be less than the state-administered zone would mean that the concerns would not be as great here as in the state- administered zone. In this zone more of the viewshed would be outside the riverway boundary, the area would have a series of benches visible from the river, there would be less high bluff areas, more of the area would be incorporated, and its proximity to the Minneapolis/St. Paul area would likely mean greater growth. For those areas within the viewshed, yet outside the riverway boundary, local zoning standards would be the primary methods of controlling scenic impacts to the riverway.

Mitigating methodologies such as the encouragement of the preservation and maintenance of mature vegetation, planting of additional vegetative buffering, the protection of cultural resources, and the prohibition of the construction of any more extremely visible towers within the viewshed would be beneficial to the preservation of the riverway's scenic quality. Actions taken outside the riverway boundary could have negligible to major impacts on the scenic resources of the riverway, depending on the magnitude of change. Therefore, the cumulative effects of NPS/state actions on the scenic quality of the viewshed would be negligibly to moderately beneficial, depending on the magnitude of changes to the scenic resources outside the riverway boundary.

Land use changes in the riverway and watershed have had a cumulative effect on the riverway's water quality, flows, soils, vegetation, and wildlife in localized areas. As the region's population continued to grow, new development would be likely near the riverway and in the communities along the river. Further habitat fragmentation of the surrounding watershed landscape would likely continue.

The entire historical distribution of the winged mapleleaf mussel has been significantly altered by human development in the Mississippi River basin, such as damming, dredging, application of fertilizers, pesticides, and herbicides, and municipal and industrial waste discharges. These developments are probably responsible for widespread and precipitous decline in mussel communities, and the extirpation or extinction of several species, although few studies have addressed directly the specific impact of any one of these factors (USFWS 1997). Impacts from continued recreational use and managing agency actions would contribute incrementally to impacts noted above.

None of the management actions are expected to add substantively to the cumulative effects on cultural resources. Growth and land use changes could affect cultural resources adjacent to or within the viewshed of the riverway. The cumulative effects of the management actions would help mitigate the effects of population growth and development, however, actions could be less effective under the no-action.

The economic and population growth in the region is expected to continue. The relatively small number of jobs and expenditures on management of the riverway would only have a minor effect on the expected growth of the total economy of the region. Therefore, there would be no appreciable socioeconomic cumulative impacts from implementation of this alternative occurring in conjunction with the region's expected overall population and economy of the region.

RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Existing development standards, proposed inventory, monitoring, and research programs, along with some restrictions on recreational use within the riverway would contribute to the long-term protection and preservation of resources and scenic character of the landscape.

UNAVOIDABLE ADVERSE EFFECTS

Some minor to locally moderate adverse impacts to natural resources would occur. In the process of resolving conflicts among different uses or reducing resource impacts, restrictions would be placed on particular uses, having an adverse effect on some users. To meet the scenic and resource protection purposes of the riverway, development restrictions on local landowners would be implemented. To meet the recreational purposes of the riverway, some conflicts between local landowners and recreational users would continue and likely increase.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Some new residential and commercial development would likely continue on private lands within the riverway boundary. Potentially, new river crossing and navigation channel maintenance could also occur. It is expected that this new development would result in the long-term localized loss of vegetation, soils, and wildlife habitat.

Any action that led to the loss of individual federally listed mussel species or their habitat would contribute to the loss of the species as an ecological and genetic resource. It is possible that this alternative would contribute to their decline. However, it is expected that the implementation of actions outlined in the recovery plans for these species would avoid this situation and contribute to their conservation.

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IMPACTS OF MANAGEMENT STRUCTURE OPTIONS

PREFERRED OPTION

This option would involve the least cost, but some minor adjustments would be made from the current management approach. The Lower St. Croix Partnership Team would provide access to the decision-making process for citizens and local interest groups. Staff services to the partnership team would be provided by the Minnesota and Wisconsin Departments of Natural Resources.

The states would retain "certification/objection/veto" authority over ordinance adoptions, amendments, and variances, but not over conditional use permits or subdivisions. On-water law enforcement would remain the same.

OPTION 1: MINOR ADJUSTMENT

This option would be more expensive to implement that the preferred option but significantly less costly than options 2 or 3. The role of the Minnesota-Wisconsin Boundary Area commission would be reduced in this option. The Lower St. Croix Planning Task Force would provide access to the decision-making process for citizens and local interest groups. State agency veto authority over local land use decisions would not change. On-water law enforcement would remain the same.

OPTION 2: JOINT POWERS BOARD

This option and option 3 would be the most expensive to implement. The role of the Minnesota-Wisconsin Boundary Area Commission would be reduced, but the Lower St. Croix Management Commission would have a larger and more independent role and would have great local representation. The joint powers board would provide greater access to the decision-making process for local governments. The joint powers board, rather than state agencies, would have veto authority over local land-use decisions. Creation of the joint powers board and the St. Croix water patrol would require action by both state legislatures and the Congress, a significant undertaking. A new on-water law enforcement agency (the St. Croix water patrol) would be created, significantly raising the cost of this option.

OPTION 3: RIVERWAY BOARD

Options 2 and 3 would be the most expensive to implement. The roles of the Minnesota-Wisconsin Boundary Area Commission and the Lower St. Croix Management Commission would be the same as described under option 2. The riverway board would directly implement local zoning in riverway communities, supplanting local decision-making. As indicated under option 2, creation of a riverway board and the St. Croix water patrol would require action by both state legislatures and Congress undertaking. Creation of a new on-water law enforcement agency (St. Croix water patrol) would significantly raise the cost of this option.

OPTION 4: NO ACTION

The riverway would continue to be managed as it has been in the past. Costs would be the same as they are now.

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COMPLIANCE

In implementing the cooperative management plan for the Lower St. Croix National Scenic Riverway, the National Park Service and the states of Minnesota and Wisconsin would comply with all applicable federal, state, and local regulations, statutes, laws, and executive orders, such as the Endangered Species Act, Clean Water Act, and National Historic Preservation Act. Several of the key federal and state statutes and regulations that affect management of the lower riverway are summarized below.

WILD AND SCENIC RIVERS ACT (82 STAT. 906) AS AMENDED

As a designated wild and scenic riverway, the National Park Service and the states of Wisconsin and Minnesota will comply with all provisions of the Wild and Scenic Rivers Act. If any water resource projects, including bridges, are proposed that might affect the lower riverway, the National Park Service is required to conduct an evaluation under section 7 of the act.

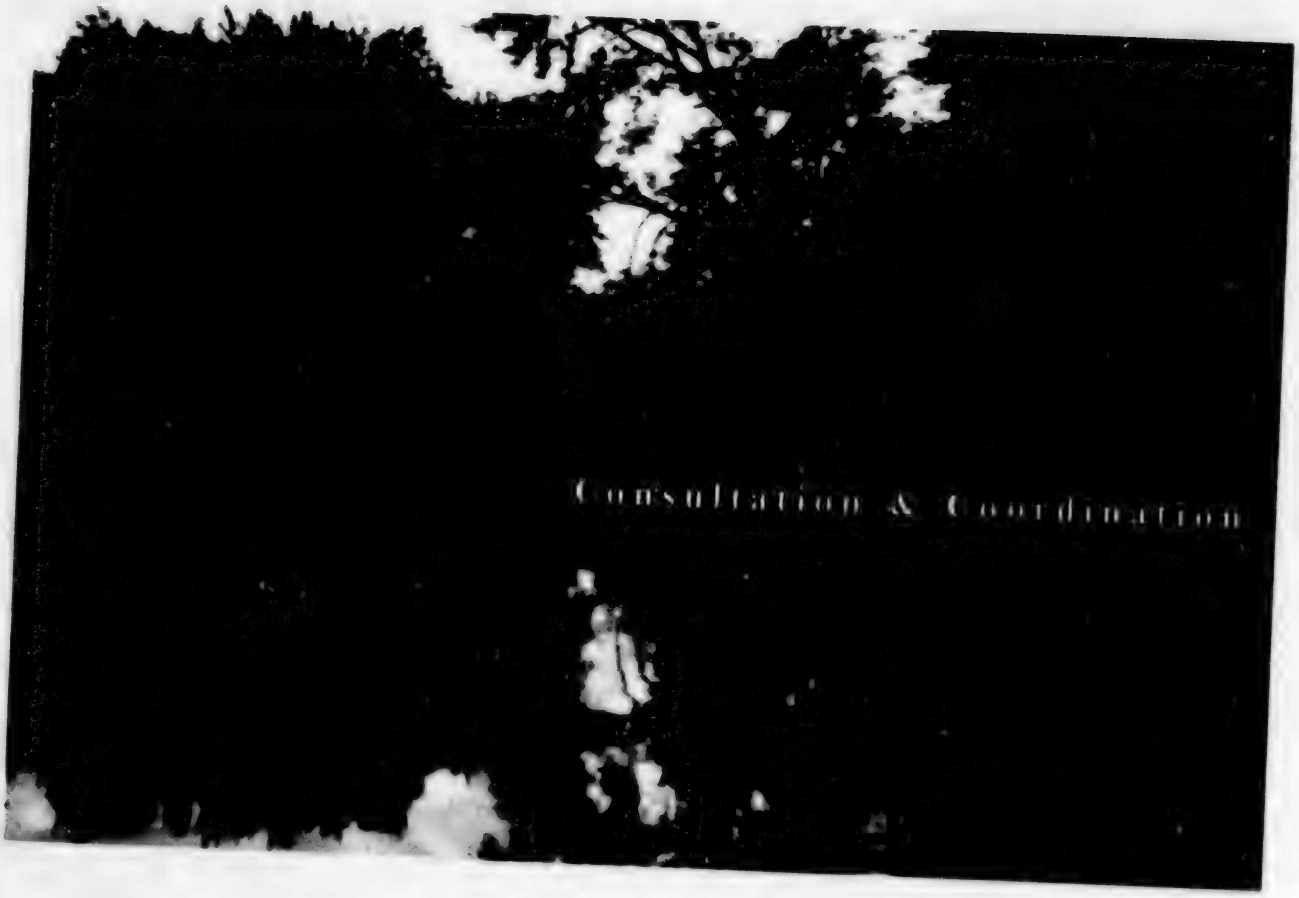
NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA)

This act sets forth the federal policy to preserve important historic, cultural, and natural aspects of our national heritage. It requires federal agencies to use a systematic, interdisciplinary, approach that integrates natural and social sciences in planning and decision making that may impact the human environment.

The Lower St. Croix National Scenic Riverway *Cooperative Management Plan / Environmental Impact Statement* was prepared pursuant to this act and its implementing regulations and guidelines. Implementation of this plan will require ongoing adherence to the National Environmental Policy Act. Additional documentation may need to be prepared in the future if NPS facilities are moved or altered, or other actions are taken to manage visitor use.

WISCONSIN ENVIRONMENTAL POLICY ACT OF 1971 (WEPA)

Wisconsin has an Environmental Policy Act(WEPA), approved by the legislature in 1971 as Wisconsin Stats. 1.11, which is largely patterned after NEPA in purpose, content, and process. The Wisconsin Department of Natural Resources (WDNR), as a Lower St. Croix Riverway management partner and whose future management activities will be guided by the cooperative management plan, is required to satisfy WEPA requirements. Wis. Admin. Code NR 150 contains applicable substantive and procedural requirements to comply with WEPA for all WDNR actions, including management plans (NR 150.03 (6)(a)(6)(a)) such as the cooperative management plan. To avoid duplication, NR 150 allows WDNR to adopt an environmental review document of another agency provided it meets the minimum requirements of WEPA. By cooperating with NPS in development of the cooperative management plan and design of the public review process, WDNR has been assured that WEPA requirements are being satisfied.



Consultation & Coordination

CONSULTATION AND COORDINATION

The *Cooperative Management Plan / Environmental Impact Statement* for the Lower St. Croix National Scenic Riverway is the product of a collaboration of the Minnesota and Wisconsin Departments of Natural Resources, the National Park Service, and the public. Consultation and coordination among the agencies and the public were vitally important throughout the planning process. The public had two primary avenues by which it participated in the development of the plan — participation in the Lower St. Croix Planning Task Force and responses to newsletters and workbooks.

LOWER ST. CROIX PLANNING TASK FORCE

The task force was established in February 1996 to guide the development of the cooperative management plan, facilitate participation of riverway stakeholders and the public in the planning process, provide feedback on the three riverway management agencies' work, and help build stakeholder consensus on the future management of the riverway. Membership of the task force was open throughout the planning process to all interested citizens. Attendees at the task force meetings included staff of the riverway management agencies, interested individuals, and citizens representing boaters, businesses, landowners, environmental groups, local governments, and various other groups. A diversity of interests was always present. Attendance at meetings was usually between 30 and 50, although some meetings had over 200 in attendance. Notices of task force meetings were sent to 53 people on the task force mailing list, 78 other individuals, 56 interagency contacts, 112 individuals in local government, and the media. All meetings were advertised and open to the public.

Between February 1996 and August 1998 the task force met 53 times. Some of these meetings were informational, intended to educate task force members, while others were workshops where the task force worked on specific topics and developed recommendations. All of the task force's recommendations for the cooperative management plan were developed through consensus.

The task force held a workshop in April 1996 to formulate preliminary statements on the lower St. Croix's purposes, significance, and exceptional resources and values. Meetings were then held through the summer of 1996 to discuss various issues and concerns regarding future use and management of the lower riverway. Issues that were covered included such topics as river crossings, vegetative cover, water quality, land protection, and recreation.

In September 1996 a workshop was held to begin identifying the range of experiences and resources conditions for which the lower riverway could be managed. This information, along with information from the April workshop and from the summer meetings was used to develop management areas.

In January 1997 the task force held a third workshop to develop management alternatives for the lower riverway. The task force agreed to an overall vision that described what the riverway ideally would look like in 20 years. Based on the riverway's resources and uses, and differing views regarding the future use and management of the lower riverway, the task force identified preliminary alternative management concepts. A series of meetings were then held through the winter and summer of 1997 to provide more detail on specific topics such as riverway crossings and to identify actions that were common to all of the alternatives.

In the summer of 1997 the task force examined different organizational structures for managing the land and water surface. From September through November 1997 the task force turned its attention to developing guidelines for revising the states' regulations on land and water surface uses.

In the winter of 1997-1998 the task force concentrated on refining the management alternatives for the lower riverway. Using information generated at earlier meetings, the alternatives were revised and clarified.

Beginning with a two-day workshop in April 1998, the task force held seven meetings attempting to reach agreement on a preferred alternative for managing the lower riverway and on the guidelines for revising the states' regulations. Unresolved issues were forwarded to the Lower St. Croix Management Commission. On August 10, 1998, the management commission met with the task force and resolved these outstanding issues for the preferred alternative.

NEWSLETTERS AND WORKBOOKS

Newsletters and workbooks were the other avenue used to keep the public informed about and involved in the planning process for the lower St. Croix. A mailing list consisting of 685 names was compiled during the planning process. This mailing list included members of the planning team from the three riverway management agencies (12), other governmental agencies (75) [combined interagency team + other agencies], nongovernmental groups/ nonprofit organizations (57), businesses and commercial interests (143), legislators (22), local governments (112), and interested citizens (264).

During the course of the planning process two newsletters and three workbooks were published and mailed to the public. In May 1996, the first planning newsletter was published, alerting people that the planning process was beginning. Newsletter #1 included the draft purpose, significance, and exceptional resource/value statements, and asked for public comments on these statements, on desired futures, and on issues the plan should address. About 430 newsletters were distributed and 23 separate responses were mailed back along with four letters from individuals who voiced opinions about what should be addressed in the plan. Most people who responded supported or did not disagree with the draft purpose, significance, and exceptional resource/value statements. Most respondents also had similar desires for the future of the lower riverway. Many wanted to see the riverway remain as it is today, wanted new development to be minimized, and the small-town flavor of the river communities to be maintained. There were widely differing views on boating, with some wanting less motorized boat traffic and/or more restrictions, and others wanting fewer restrictions on boating and more opportunities for access.

Newsletter #2, published in November 1996, summarized the response to the May newsletter and identified changes that were made in the purpose, significance, and exceptional resource/value statements based on the public's comments. The newsletter also identified the issues and concerns that would be addressed by the cooperative management plan, described landscape units of the lower St. Croix, and described the activities of the task force. No response form was included in the newsletter.

In April 1997 an alternatives workbook was published. The workbook included the descriptions of potential land and water management areas, and five preliminary management alternatives, plus a "no action" alternative. A vision for the lower riverway also was presented. A response form was included in the workbook, asking the public to comment on the vision statement and the management alternatives. Fifty-three responses were received on the workbook. Some of the respondents felt that conditions were fine and no changes were needed regarding land use regulation, while some felt that additional restrictions were needed to ensure that conditions stay the way they are now. Landowners wanted less regulation on their private property. There was a notable lack of discussion about river use conflicts among those who responded to the workbook.

Workbook #2, published in April 1998, was intended to compile the existing products of the task force and serve as a reference tool for participants at the preferred alternative workshop. No response form was included in this workbook.

Workbook #3, also published in April 1998, focused on the guidelines for revising the state land use and surface water use regulations. The workbook included summary matrices describing the preferred alternative and guideline comparison matrices. The public was asked to indicate its support for different options being considered by the task force and the rationale for supporting the option. Approximately 125 written responses were received on the options.

CONSULTATION WITH THE STATE HISTORIC PRESERVATION OFFICES AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION

Section 106 of the National Historic Preservation Act of 1966 as amended (16 USC 470, et seq.) requires that federal agencies that have direct or indirect interest jurisdiction take into account the effect of undertakings on national register properties and allow the Advisory Council on Historic Preservation an opportunity to comment. Toward that end the National Park Service would work with the Minnesota and Wisconsin State Historic Preservation Offices and the advisory council to meet requirements of 36 CFR 800. Both state historic preservation offices were invited to participate in the planning process, and each had an opportunity to review and comment on the draft document. In addition to federal agency consultation, the state riverway managing agencies will also consult with the SHPOs as appropriate, and as directed by state statute and rule.

CONSULTATION WITH AMERICAN INDIANS

Consultation with American Indian groups who historically occupied the area of the riverway was initiated during the planning process. Two Ojibway Bands (the St. Croix Band and the Mille Lacs Band), the Prairie Island Community of Dakota, and the Great Lakes Indian Fish and Wildlife Commission were invited to participate in this planning effort. All planning task force mailings and newsletters have been sent to the tribes. The Minnesota Indian Affairs Council and Mille Lacs Band presented information at a task force meeting concerning the cultural significance of the St. Croix valley to American Indians. Conversations have been ongoing throughout the planning process to inform the tribes about the progress of the plan and identify how and to what extent they would like to be involved. The tribes will also have the opportunity to review and comment on this draft plan.

CONSULTATION WITH THE U.S. FISH AND WILDLIFE SERVICE

Informal consultation with the U.S. Fish and Wildlife Service began in May 1995 with a request for a list of endangered and threatened species that may occur in or near the lower riverway. A response dated July 1995 was received. An updated list was requested in April 1997 and a response dated June 1997 was received and is included in appendix D. The National Park initiated formal consultation pursuant to the Endangered Species Act with the U.S. Fish and Wildlife Service regarding management directions that may adversely affect the federally endangered Higgins' eye mussel and the winged mapleleaf mussel. The biological opinion from the U.S. Fish and Wildlife Service is included in appendix D of this *Final Environmental Impact Statement.*

COMMENTS AND RESPONSES

The *Draft Cooperative Management Plan/Environmental Impact Statement* for the Lower St. Croix National Scenic Riverway was released to the public on September 17, 1999. The public comment period ended November 30, 1999. Approximately 650 copies of the document were distributed to federal and state officials and agencies, local governments, organizations, individuals, and public libraries. The document was also available for review on the internet. Informational open houses were held in Hudson, Wisconsin, on October 25 and in Stillwater, Minnesota, on October 26. The purpose of the open houses was to discuss and answer questions about the document and solicit written comments concerning the plan.

The managing agencies received almost 900 written responses during the public review period, including written letters, e-mail comments, form cards, and comment forms that were either filled out and submitted at the open houses or mailed in. Of these responses, 37 were from agencies, organizations, and businesses, including one federal agency, four state agencies, two regional and interstate agencies, 10 local agencies and governments, and 20 organizations and business interests. Responses were also received from about 850 individuals, including approximately 600 form cards. Almost all of the form cards supported Alternative E, no action. The majority of the other responses did not say which alternative they favored. Of those that did, approximately an equal number, around 30, expressed support for the preferred alternative or alternative D, about half as many supported alternative E, and only a couple individuals supported alternatives A or C.

Comment letters from all agencies, governments, organizations, and businesses are reproduced. Responses are provided to substantive comments questioning supporting information or environmental analysis, comments recommending actions or alternatives beyond the range of alternatives in the draft plan, comments that caused changes or revisions in the preferred alternative, or comments requesting clarification of the draft. No response was given to comments simply expressing preference for an alternative. Because of the volume of written comments received, only individuals' letters that contained comments not covered by the agency and organization letters have been printed and are listed below. Where appropriate, the text in the *Final Environmental Impact Statement* has been revised to address the comments. These changes are identified in the managing agencies' responses.

Federal Agencies
Environmental Protection Agency

Regional Agencies
Metropolitan Council
Minnesota-Wisconsin Boundary Area Commission

State Agencies
Minnesota Department of Transportation
Minnesota Historical Society
Wisconsin Department of Transportation
State Historical Society of Wisconsin

Local Agencies
City of Afton
City of Bayport
City of Lake St. Croix Beach
City of Marine on St. Croix
City of Prescott
City of Stillwater
Village of Osceola
Pierce County
St. Croix County
Washington County

Organizations and Businesses
Andersen Corporation
Beanies
Carpenter Nature Center
Cedar St. Croix Landowners Association
Thousand Friends of Minnesota
Empson Archives
Minnesota River Valley Audubon Chapter
Northern States Power Company
Port of Sunnyside
Riverway Consensus Standard
Sierra Club
St. Croix River Marina Managers
St. Croix River Association
St. Croix Waterways Association
Steamboat Inn
Stillwater Heritage Preservation Commission
Upper Mississippi Waterway Association
Wildlaw
Wolf Marine, Inc.
Citizens for Responsible Zoning and Landowner Rights

Individuals
Larry Wolf
Gene Anderson
Dennis O'Donnell
Clarence Nelson
Bill and Sharon Clapp
Kathryn M. Nelson

COMMENTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 03 1999

REPLY TO THE ATTENTION OF:

Mr Randy Thomsen
Planning Coordinator
Lower St. Croix National Scenic Riverway
117 Main Street South
Stillwater, Minnesota 55082

Dear Mr. Thomsen:

In accordance with the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, United States Environmental Protection Agency (U.S. EPA) Region 5, has reviewed the Draft Cooperative Management Plan/Draft Environmental Impact Statement (DEIS) for the Lower St. Croix National Scenic Riverway, Minnesota and Wisconsin (EIS No. 990325). The National Park Service (NPS), Minnesota and Wisconsin Department of Natural Resources (DNR) is proposing the plan to address basic management philosophy for the riverway and to provide the strategies for addressing issues and achieving identified management objectives.

The Draft Cooperative Management Plan/DEIS seeks to provide a general direction for managing the Lower St. Croix National Scenic Riverway for the next 15 to 20 years. Six alternatives addressing land and water use management were considered. Alternative E is the No Action alternative which is the present management approach based on the 1976 Master Plan and associated policy. The other alternatives include various combinations of actions including the following: directed land development, maintenance of the landscapes' visual qualities, restoration of natural landscapes and increases or decreases in the level of recreational uses allowed. The preferred alternative would maintain long stretches of the lower riverway's natural and rural landscape, while allowing limited, planned development in communities that would be consistent with the historic character of the communities.

The U.S. EPA recognizes the challenges inherent in managing a scenic riverway where the area's natural, historic, ecological, and aesthetic values must be maintained along with the St. Croix's outstanding scenic, recreational and geologic values. We note that one of the purposes of the Lower St. Croix National Scenic Riverway is to accommodate a diverse range of recreational opportunities that do not detract from the exceptional natural, cultural, scenic, and aesthetic resources. It appears that the NPS has taken steps to consult and coordinate with many appropriate agencies as well as with citizens to address the existing issues at the Lower St. Croix National Scenic Riverway.

1 However, the U.S. EPA has some concerns with the completeness of the DEIS and potential water quality impacts. It is not clear how the Cooperative Management Plan's objectives will be achieved regardless of what alternative is selected. The DEIS does not include a sufficient

RESPONSES

1. The managing agencies are aware of the lack of information and data gaps related to water quality, land cover, and endangered species and have initiated actions to correct them. Detailed water quality information, planned corrective actions, and ongoing monitoring plans are being developed as part of preparation of *the St. Croix River Basin Water Resources Management Plan.* This is referenced on pages 19 and 32 of the DEIS and is discussed in detail on pages 159-161. Language has been added to the discussion of water quality and quantity management directions (page 32 of the draft) that clarifies the relationship between this plan and the *St. Croix River Basin Water Resources Plan.* Additional text describing existing land cover has been prepared and inserted in the "Affected Environment" chapter, referencing the "Atlas of Land Cover and Land Cover Change," MWBAC, 1993. Planned land management is described in the description of the preferred alternative on pages 61-67 and in appendix A. Endangered species are discussed throughout the plan. A significant potential threat to endangered species in the riverway is a threat to native mussels from the zebra mussel. Zebra mussel control is addressed in the *Zebra Mussel Task Force Action Plan*, which includes a monitoring component and is updated annually. That plan is described on pages 33-34 of the draft and is found in appendix G. Water quality problems can affect mussels; water quality issues are being addressed in the planning process noted above. Peaking operations at the NSP dam at St. Croix Falls can affect endangered mussels; actions are being taken to implement run-of-the-river operations at the dam to eliminate this threat, and the text on page 34 has been corrected.

COMMENTS

amount of data on specific measures such as water quality, land cover, and endangered specie nor does the DEIS include an explanation as to how these indicators are or will be used. This type of data is critical in establishing an environmental baseline. This baseline will be key in th development of indicators which will determine when management objectives have been successfully achieved. It could then also be used to establish different objectives. The DEIS should have identified and discussed the type of corrective actions and ongoing monitoring pla that would be used. The Final Environmental Impact Statement (FEIS) needs to address these issues in a detailed and complete manner

In addition to the concern described above, the U.S. EPA has some concerns with the preferre alternative based on existing and potential water quality implications. As identified in the DEIS the Lower St. Croix has experienced a number of fish consumption advisories for several fish species due to PCB and Mercury contamination. In addition to this indicator of watershed ha the Lower St. Croix is also vulnerable to impacts to special aquatic species, agricultural runoff and population increases. The DEIS states that recreation use of the riverway currently impac water quality through improper disposal of human wastes and through bank erosion caused by the trampling of shoreline vegetation. Under the preferred alternative and most of the other alternatives, the numbers of recreational users will increase. This will result in a more profoun impact on water quality in the riverway. The FEIS needs to identify and full discuss the types management objectives that will be used to address this issue.

2 Due to the environmental stressors listed above, the U.S. EPA would have liked to have see preferred alternative include specific objectives to improve environmental conditions in the Riverway. We envision a strategic and selective restoration plan that seeks improvement in aquatic and terrestrial resources. One alternative, Alternative D includes provisions for resto natural resources on the riverway. The U.S. EPA considers that alternative to be the environmental preferable alternative. Over the long term, we believe that this alternative or a alternative that incorporates restoration aspects in it, will allow the most diversity of recreatio uses by preserving the primary resource for all of the activities, the water quality of the Lowe Croix. Therefore, we recommend that if the preferred alternative is pursued, restoration provisions from Alternative D be incorporated to the maximum amount possible.

3 Based on our review of the analysis and information provided in the DEIS, our agency has ra the document an "EC-2". This rating means that the EPA has identified environmental impac that should be avoided in order to fully protect the environment and more information should included in the Environmental Impact Statement to characterize environmental impacts. This rating will be published in the Federal Register. If you have any questions or comments, plea contact Sherry Kamba at 312 353-5794 or by E-mail at kamba.sherry@epa.gov

Sincerely yours,

Al Fenedick Jr

for Shirley Mitchell, Deputy Director
Office of Strategic Environmental Analysis

RESPONSES

2. Controlling the numbers of recreational users of the riverway is difficult due to the large number of access points, but growth in use would be limited under the preferred alternative. The discussion of user carrying capacity found on page 71 has been revised to help ensure that user numbers do not degrade natural resources; standards and indicators would be developed and a monitoring program initiated. The discussion of island and public shoreline management found on pages 67-68 has been revised to clarify that camping would be more aggressively managed to reduce the impacts of trampling and inappropriate disposal of human waste.

3. For the plan to be successfully implemented, it would need the active support and participation of the states and local governments. Although alternative D would provide greater protection for natural resources, the land use controls necessary for implementation would be difficult to enact. This would be the most expensive alternative to implement and it would be difficult to acquire necessary funds. The implementation costs section found on pages 124-126 has been revised to more accurately reflect the costs of implementing each alternative. The description of alternative D on pages 100-104 has been revised to more clearly describe how it would be implemented. Enhanced natural resource management common to all alternatives is discussed on pages 31-35 of the draft plan.

COMMENTS

Metropolitan Council
Working for the Region, Planning for the Future

Environmental Services

November 15, 1999

Randy Thomson, Planning Coordinator
Lower St. Croix River
117 Main Street
Stillwater, MN 55082

RE: Lower St. Croix Riverway Cooperative Management Plan and Draft EIS
Metropolitan Council District 12
Referral File No. [illegible]

Dear Mr. Thomson:

The Council staff has reviewed the management plan draft environmental impact study (EIS) for the Lower St. Croix River corridor.

The Lower St. Croix River is a federally designated Wild and Scenic River. Once the final cooperative management plan and EIS is completed, it will be implemented by the managing agencies. Since this is a federal project, the Minnesota Environmental Quality Board's review rules do not apply. However, the Council's review determines whether the EIS adequately and accurately addresses regional concerns, and we offer the following comments.

The Metropolitan Council is responsible for planning within the seven county metropolitan area. Its mission is to improve regional competitiveness in the global economy, so this region is one of the best places to live, raise a family, work and do business.

1 The Council's policies to guide the region's growth are included in the *Aviation Policy Plan*, the *Recreation Open Space Policy Plan*, the *Transportation Policy Plan*, the *Water Resources Management Policy Plan* and in the *Regional Blueprint*. The final EIS should reference the Council's regional planning authority and should identify those regional policies that are relevant to the river corridor. The following are examples:

The Council's *Regional Blueprint* includes a Regional Growth Strategy which establishes a regional growth pattern that intends to accommodate an additional 270,000 households and 500,000 people between 2000 and 2020. The Regional Growth Strategy identifies the cities of Stillwater, Oak Park Heights and Bayport as an urban area, and identifies adjacent areas to the west as urban reserve, or areas needed for future urban growth. See the attached Regional Growth Strategy map.

2 The management plan's preferred alternative identifies Oak Park Heights and Bayport as "small towns", and describes these areas as predominantly residential. The final EIS should acknowledge the future growth anticipated in the cities of Stillwater, Oak Park Heights and Bayport, and should redefine these areas as River Towns.

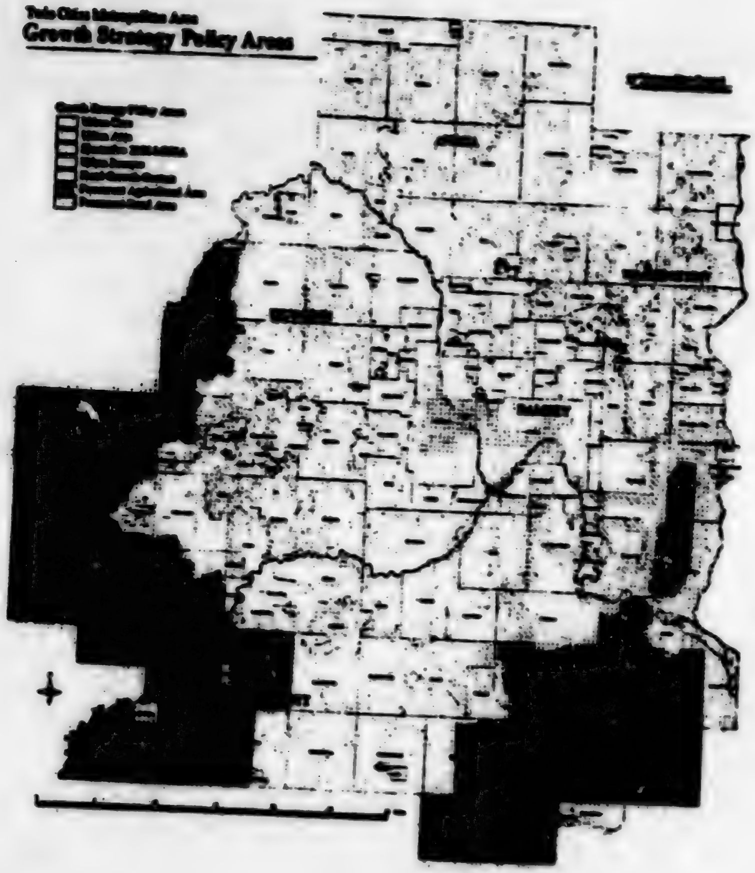
The Council's *Transportation Policy Plan* indicates that regional transportation investments will be focused to help implement the Regional Blueprint and the regional growth strategy to support the region's economic vitality and quality of life. The Council will allocate regional highway capacity in accordance with the planned expansion of the urban service area.

RESPONSES

1. The plan has been revised to reference the appropriate plans (page 20 of the drat plan).

2. The management plan places Stillwater and Oak Park Heights in the river town district and Bayport in the "small town" district. Only a small portion of each community lies in the riverway, and the Metropolitan Council cannot expect communities to meet growth goals in environmentally sensitive districts, something that was confirmed by the Metropolitan Council's Livable Communities Committee on December 20, 1999.

COMMENTS		RESPONSES
Randy Thoreson November 15, 1999 Page 2 The Council will work with the Minnesota Department of Transportation (MNDOT), and local governments to ensure that the metropolitan highway system is designed and built to increase efficiency, serve travel demand, provide user safety and integrate and enhance other travel modes. The planning decisions and operation of transportation projects and facilities are to be consistent with federal, state and regional environmental standards, regulations, plans, programs and policies.		
At this time, the Council is collaborating with MNDOT, the National Park Service and the Federal Highway Administration and other agencies, in a planning process for a preferred alternative for the new St. Croix River bridge. The planning process will result in recommendations for the river crossing that are acceptable to all agencies. These recommendations should be referenced in the final EIS. For more information about the bridge, contact Adam Josephson, at the MNDOT Roseville office.	3	3. The plan acknowledges (page 18 of the draft plan) that a bridge planning process is underway and is separate from and independent of this plan.
The draft EIS does not, but should include the impact of limiting the capacity of future river crossings. Given existing and future growth on both sides of the river, restricting the capacity of bridges will have an impact on travel time, congestion, accessibility, business activity and potentially, air quality. The draft EIS does not mention these impacts on the existing or future population, or on the economies of Wisconsin and Minnesota cities and counties directly affected by the management plan.	4	4. The Minnesota and Wisconsin Departments of Transportation have stated that there will be no need for additional bridge capacity within the 20-year life of the plan; therefore, no impacts are anticipated.
The *Regional Blueprint's* policy for Major River Corridors indicates that the Council will recommend ways of coordinating the management of the Mississippi, Minnesota and St. Croix River corridors that recognize their importance for orderly regional development, their multiple uses, unique characteristics and the impact they have on each other. The Council's *Water Resources Management Policy Plan* indicates that the Council will integrate river corridor management plans for the major rivers into an overall basin management plan, and will use a watershed management approach in developing partnerships to plan and implement actions for control of point and nonpoint source pollution. If you have any questions or need further information, please contact Victoria Boers, principal reviewer, at 651 602-1621. The Council's website includes information about the regional policy plans for Aviation, Recreation Open Space, Transportation, Water Resources Management, and about the Regional Blueprint. The web address is http://www.metrocouncil.org/. Sincerely, Helen A. Boyer Helen A. Boyer, Director Environmental Services Division c: Marc Hugunin, Metropolitan Council District 12 Keith Buttleman, MCES Director, Environmental Planning and Evaluation Department Richard Thompson, Comprehensive Planning Supervisor Linda Milashius, Carl Ohrn, Victoria Boers, Judy Sventek, Metropolitan Council Staff		


Twin Cities Metropolitan Area
Growth Strategy Policy Areas

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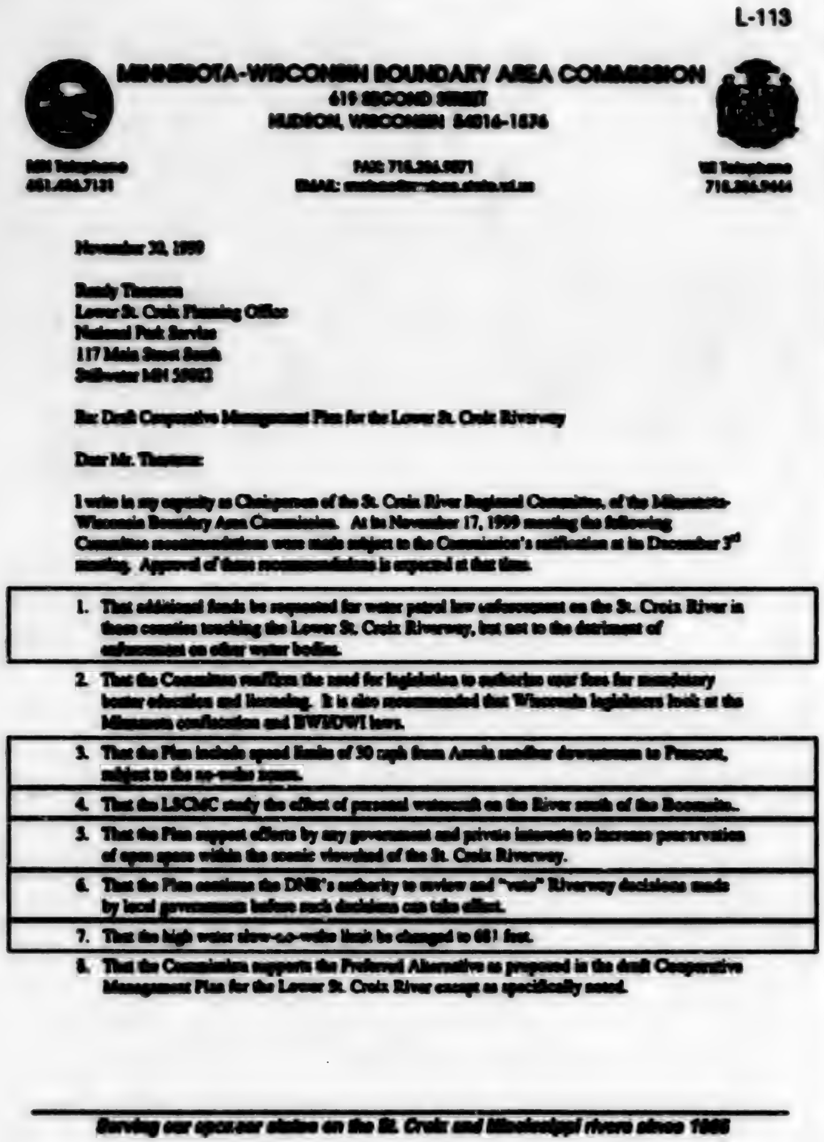
COMMENTS



L-113

MINNESOTA-WISCONSIN BOUNDARY AREA COMMISSION
619 SECOND STREET
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EMAIL: [illegible]

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November 22, 1999

Randy Thoreson
Lower St. Croix Planning Office
National Park Service
117 Main Street South
Stillwater MN 55082

Re: Draft Cooperative Management Plan for the Lower St. Croix Riverway

Dear Mr. Thoreson:

I write in my capacity as Chairperson of the St. Croix River Regional Committee, of the Minnesota-Wisconsin Boundary Area Commission. At its November 17, 1999 meeting the following Committee recommendations were made subject to the Commission's ratification at its December 3rd meeting. Approval of these recommendations is expected at that time.

1 1. That additional funds be requested for water patrol law enforcement on the St. Croix River in those counties touching the Lower St. Croix Riverway, but not to the detriment of enforcement on other water bodies.

2. That the Commission reaffirms the need for legislation to authorize user fees for mandatory boater education and licensing. It is also recommended that Wisconsin legislators look at the Minnesota confiscation and BWI/DWI laws.

2 3. That the Plan include speed limits of 30 mph from Arcola sandbar downstream to Prescott, subject to the no-wake zones.

3 4. That the LSCMC study the effect of personal watercraft on the River south of the Boomsite.

4 5. That the Plan support efforts by any government and private interests to increase preservation of open space within the scenic viewshed of the St. Croix Riverway.

5 6. That the Plan continues the DNR's authority to review and "veto" Riverway decisions made by local governments before such decisions can take effect.

6 7. That the high water slow-no-wake limit be changed to 681 feet.

8. That the Commission supports the Preferred Alternative as proposed in the draft Cooperative Management Plan for the Lower St. Croix River except as specifically noted.

Serving our sponsor states on the St. Croix and Mississippi rivers since 1965

RESPONSES

1. The "Implementation Costs" section on pages 124-126 of the draft plan have been revised to reflect increased costs for on-water law enforcement.

2. The plan has been modified to include a 24-hour speed limit of 20 mph between the Arcola Sandbar and the north limits of Stillwater, and a speed limit of 40 mph between sunrise and sunset and 20 mph between sunset and sunrise on the river between the north limits of Stillwater and the confluence with the Mississippi River at Prescott.

3. Comment noted.

4. This is consistent with the discussion on pages 29-30 of the draft plan and the preferred alternative as discussed on pages 61-67 of the draft plan.

5. The plan has been revised to clarify that the states would retain "certification" authority "objection" authority "veto" power over local government actions to adopt riverway ordinances, ordinance amendments and variances, but not over local government actions on conditional use permits and subdivision plats.

6. The plan has been revised to show the high-water, no-wake rule would remain at 683 feet.

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MWBAC letter to Randy Thoreson
November 20, 1999, Page 2

I submit these recommendations for the consideration of the Lower St. Croix Management Commission in response to the draft Lower St. Croix Cooperative Management Plan, Environmental Impact Statement.

Sincerely,

Judith R. Kinkead

Judith R. Kinkead, Chair
St. Croix River Regional Committee

Serving our sponsor states on the St. Croix and Mississippi rivers since 1965

COMMENTS

L-98

Minnesota Department of Transportation

Office of Environmental Services
3485 Hadley Avenue North, Mail Stop 620
Oakdale, MN 55128-3307

Phone: 612/779-5072
Fax: 612/779-5109

November 30, 1999

Randy Thoreson
Lower Riverway Planning Coordinator
117 Main Street South
Stillwater, MN 55082

SUBJECT: DRAFT LOWER ST. CROIX RIVER COOPERATIVE MANAGEMENT PLAN/ENVIRONMENTAL IMPACT STATEMENT

Dear Mr. Thoreson :

The Minnesota Department of Transportation has reviewed the above referenced Draft Cooperative Management Plan /Environmental Impact Statement (CMP). Let us point out our 20 year Transportation System Plan for our Metropolitan District, which encompasses the reach of the Lower St. Croix. That system plan foresees no additional river crossings nor capacity improvements to existing bridges through the planning horizon, year 2020. The Stillwater-Houlton Bridge is undergoing a separate environmental and project review process. We also point out that a corridor study is currently being undertaken of Minnesota Trunk Highway 8, between Interstate Highway 35 near Forest Lake and the City of Taylors Falls. With these understandings, we have a number of comments and questions for your consideration.

1 The document offers a range of alternative management strategies and land and water use alternatives for the riverway. One of our concerns is the apparent additional level of management which the plan envisions beyond the statutory riverway boundaries, through implementation of a companion Watershed Stewardship Initiative. Such a proposal has the potential to have far reaching social, environmental and economic effects on a large portion of western Wisconsin, and eastern Minnesota, including the Twin Cities metropolitan area, which lies within the St. Croix watershed. Mn/DOT has a number of questions and concerns regarding such an ambitious undertaking, including the underlying statutory authority. However, since there is little detail provided in this plan addressing these issues, we will limit our comments to transportation issues, or facilities and activities which have a direct effect on the riverway.

2 **Description of the Lower Riverway**
The document mentions the *riverway's* free flowing character. While portions of the river may resemble a free flowing system, the plan would err if it did not recognize the tremendous influence on the river from dams both upstream at Taylor's Falls and downstream at Lock and Dam Number 3. The dam at Taylor's Falls controls the flow in the river, and Lock and Dam Number 3 controls the pool elevation of Lake St. Croix. These essential facts should not be ignored.

RESPONSES

1. The text on pages 19 and 31 has been corrected to clarify that the initiative is voluntary and does not carry any regulatory authority.

2. The description of the "Affected Environment" on page 158 of the draft plan has been revised to more accurately reflect the influence of the two dams.

	COMMENTS	RESPONSES
3	**Stillwater-Houlton Bridge** The document indicates that the proposed bridge between Houlton and Stillwater is not addressed in this plan, but rather through separate processes. We agree, and find that this document should clearly state that the final outcomes of the CMP plan are not intended to be applied to the Stillwater-Houlton bridge project, or to the final disposition of the Stillwater Lift Bridge.	3. The relationship of this plan with the bridge project is clarified on page 18 of the draft plan.
	River Crossing Alternatives We cannot fully support any of the proposed river crossing policy alternatives. One difficulty we see is that once any of these alternatives are adopted, it has the potential to become rigid in its application. We believe the plan should articulate a more flexible position on these issues, so future decision makers can exercise appropriate levels of discretion at the time such decisions present themselves. We suggest that the need for crossings as well as their location, magnitude, etc, be evaluated on a case by case basis.	
4	We suggest that river crossing policy alternatives be based on the following general concepts: Any proposed significant changes to the river crossings will require site-specific environmental evaluations and approvals from applicable local, state and federal agencies. All proposals will be developed in close coordination with river managing agencies. Corridor consolidation can be encouraged, but only where practical, safe, environmentally sound, and not cost prohibitive. It should be recognized that placing utilities on or near a structure will not always meet these considerations. Utilities on bridges cannot always be accommodated due to safety considerations. Bringing utilities to a bridge and then back to another location may also have significant environmental impacts in and of itself. From a river agency perspective it is preferred that the size, scale, character and number of bridges not substantially change. We believe the plan should acknowledge that the riverway exists within a broader context. The need for crossings by natural gas lines, water, electrical, rail, or highway is a function of the needs of interstate commerce, outside the jurisdiction and control of the river agencies and the two states. This plan should acknowledge the essential interstate commerce needs of the states and nation at large, and describe how riverway policies fit into those needs. No alternative should be adopted which would prohibit changes to the size, scale, character or number of crossings, where need has been demonstrated in accordance with standard accepted procedures. However, such changes would only be allowed after extensive	4. River crossings have a profound affect on the river environment and on the outstandingly remarkable values for which the riverway was designated. As such, they must be carefully controlled. MnDOT and WisDOT have both reported that they do not see any need for new bridges across the river during the 20-year life of this plan. The text on page 67 of the draft plan has been revised to more clearly state how future river crossings would be evaluated.
5	consultation with the river managing agencies. A preferred alternative which would limit such crossings should be accompanied by an analysis of the secondary and cumulative effects of that alternative. If the plan envisions controls on the movement of people, goods and services between states, it should also acknowledge and assess the social, economic and environmental impacts which such a policy would produce elsewhere in the region.	5. See the response to Metropolitan Council comment 4.

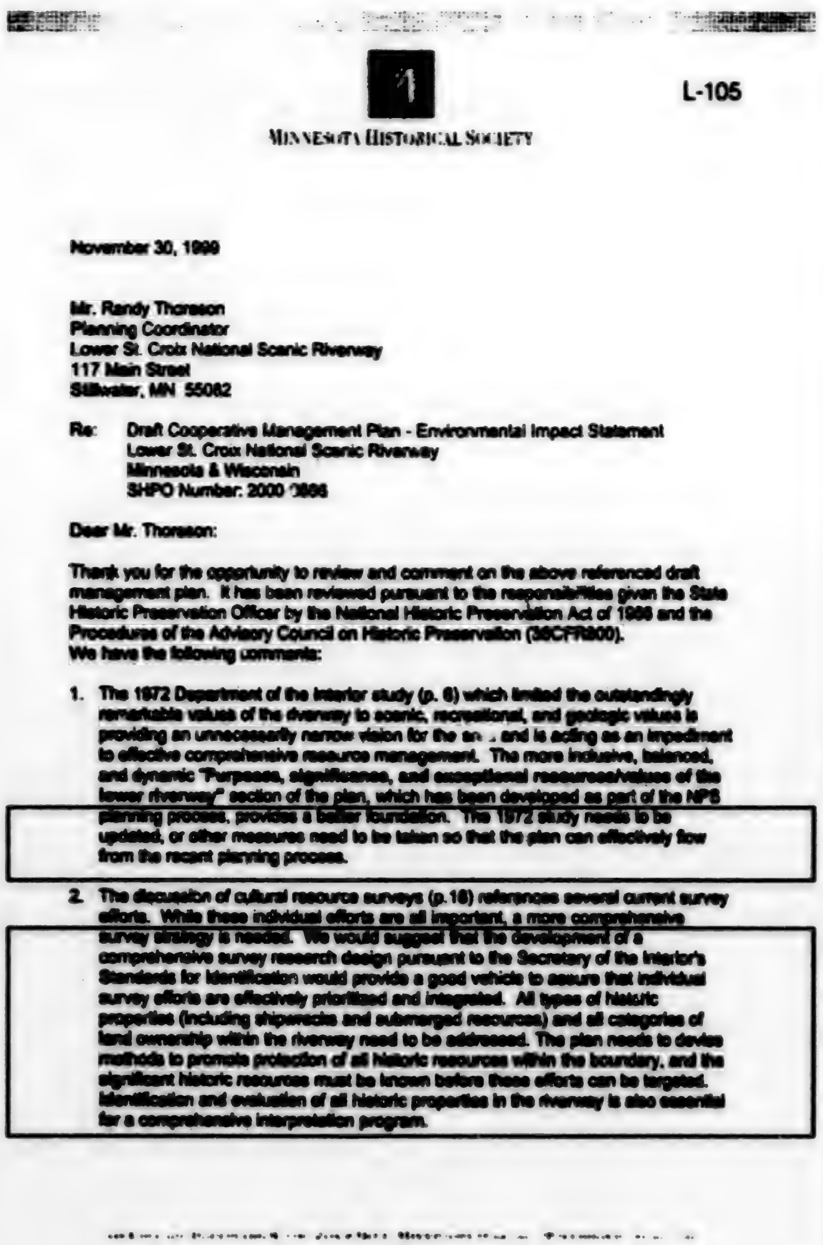
	COMMENTS	RESPONSES
	In general, when bridges are replaced the existing bridges are removed. However, if the old structure is on or eligible for the National Register of Historic Places, then both Section 4(f) of the Transportation Act and Section 106 of the National Historic Preservation Act should be used to determine the final disposition of the bridge or facility. **Miscellaneous**	
6	The map delineating the riverway is of such scale that it is difficult to determine the extent of the riverway corridor. It should be clearly indicated that the Highway 8 bridge in Taylors Falls is outside the riverway boundary.	6. The riverway as established by Congress lies between the dam at St. Croix Falls and the confluence with the Mississippi River at Prescott. The riverway boundary as defined in the *Federal Register* excludes the state parks (their protection was assumed) and therefore excludes the land on the Wisconsin side of the bridge, but does include the land on the Minnesota side of the bridge. The Highway 8 bridge is within the riverway.
7	Map, page 7. The map incorrectly labels TH 36 as TH 212.	7. The error has been corrected.
8	Maps on pages 4, 62, 70, 77, 83, 87, 92, 98, 101 and 107. These maps have omitted several highways and crossings that are important access routes to the riverway area. These should be acknowledged and shown:	8. The Region map on page 4 of the draft plan has been corrected to show Highway 95, Highway 243, and Highway 64. The other maps exist for specific purposes and showing many highways would only serve to clutter them.
9	TH 95 from the Prescott area along the west side of the river to Taylors Falls; TH 96 from the north side of Stillwater to the White Bear Lake area; TH 97 from TH 95 north of Marine on St. Croix to I-35 near Forest Lake; TH 243 Crossing at Osceola; Wisconsin STH 64 from STH 35 toward New Richmond. A number of highways of lesser civil divisions	9. See previous comment.
	Overall, we support the practice of productive coordination and open communication when developing major projects on and along the riverway. Transportation projects affecting the riverway should be developed realizing the character and sensitivity of the area, including both the area's transportation needs and the nature of the river itself. Sincerely, Leonard G. Eilts Leonard G. Eilts Chief Environmental Officer Director, Office of Environmental Services	

To: Randy Thoreson at NP--MWR
Subject: Mn/DOT's Comments on the Draft Cooperative Management Plan f
-------------------------------- Message Contents

The Minnesota Department of Transportation (Mn/DOT)-Office of Aeronautics offers, for the record, the following comments on the Draft Cooperative Management Plan for the Lower St. Croix River.

1 It is Mn/DOT's understanding that the recommended speed limits for boats would not affect seaplane take offs and landings. Mn/DOT recommends that the draft plan be revised to clarify that boat speed limits do not apply to aircraft operations.

Larry Myking
Mn/DOT-Office of Aeronautics
222 E. Plato Blvd.
Saint Paul, MN 55107-1618
Office: 651.296.8202
Fax: 651.297.5643
E-mail: larry.myking@dot.state.mn.us



L-105

MINNESOTA HISTORICAL SOCIETY

November 30, 1999

Mr. Randy Thorsson
Planning Coordinator
Lower St. Croix National Scenic Riverway
117 Main Street
Stillwater, MN 55082

Re: Draft Cooperative Management Plan - Environmental Impact Statement
Lower St. Croix National Scenic Riverway
Minnesota & Wisconsin
SHPO Number: 2000 3866

Dear Mr. Thorsson:

Thank you for the opportunity to review and comment on the above referenced draft management plan. It has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and the Procedures of the Advisory Council on Historic Preservation (36CFR800).
We have the following comments:

1. The 1972 Department of the Interior study (p. 6) which limited the outstandingly remarkable values of the riverway to scenic, recreational, and geologic values is providing an unnecessarily narrow vision for the an . and is acting as an impediment to effective comprehensive resource management. The more inclusive, balanced, and dynamic "Purposes, significance, and exceptional resources/values of the lower riverway" section of the plan, which has been developed as part of the NPS planning process, provides a better foundation. The 1972 study needs to be updated, or other measures need to be taken so that the plan can effectively flow from the recent planning process. **1**

2. The discussion of cultural resource surveys (p.16) references several current survey efforts. While these individual efforts are all important, a more comprehensive survey strategy is needed. We would suggest that the development of a comprehensive survey research design pursuant to the Secretary of the Interior's Standards for Identification would provide a good vehicle to assure that individual survey efforts are effectively prioritized and integrated. All types of historic properties (including shipwrecks and submerged resources) and all categories of land ownership within the riverway need to be addressed. The plan needs to devise methods to promote protection of all historic resources within the boundary, and the significant historic resources must be known before these efforts can be targeted. Identification and evaluation of all historic properties in the riverway is also essential for a comprehensive interpretation program. **2**

1. The outstandingly remarkable values were established by the study team prior to congressional designation of the riverway and cannot be changed.

2. Cultural resource surveys would be conducted under the preferred alternative as described on page 73 of the draft plan. The "Implementation Costs" section (pages 124-126 of the draft plan) has been rewritten to include the cost of these surveys.

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COMMENTS	RESPONSES
3 — 3. The section which discusses the lack of cultural resource management (p.16), needs more substantive discussion and definition of management issues. While it does acknowledge that cultural resources have been a lower management priority than natural resources, it does not identify the specific issues that need to be addressed.	3. The text on pages 13-18 of the draft plan provides a brief overview of planning issues; a more detailed description is found on page 72 of the draft plan.
4 — 4. The chart of land management areas (p. 51) allows that the most developed of the classifications - *Rivertown* - still includes "some natural features". However, at the other end of the spectrum, the *Natural and Minimally Disturbed* classifications should specifically allow for the existence of historically significant cultural features. These cultural features should also be acknowledged in the descriptions on pages 49 and 50.	4. Comment noted.
5 — 5. The section on river crossings (p. 67) indicates that replacement of a National Register listed or eligible bridge would need to be reviewed through the Section 106 process. It should be recognized that this review responsibility would lie with any federal agency funding or permitting a project, such as the Federal Highway Administration or the U.S. Army Corps of Engineers. We would expect that the management plan and the NPS would embrace a more affirmative approach in promoting the preservation of these important cultural resources as part of the scenic, recreational, and historical values of the riverway.	5. Comment noted.
6 — 6. The section on cultural resources management (p. 72) indicates that "... in addition to National Register properties, cultural resources are also traditional cultural properties ... and historic landscapes.." Traditional cultural properties and historic landscapes are *not in addition* to National Register properties; these types of properties *are included* in the National Register.	6. The text has been corrected.
7 — 7. The discussion on Page 73 indicates that archaeological surveys would precede any future ground disturbing activities undertaken by the managing agencies, and that these would be conducted under the provisions of Section 106 of the National Historic Preservation Act. Given the fact that the Section 106 process is limited to *federal* undertakings, it is not clear how this provision will be administered by non-federal managing agencies.	7. The text has been changed to commit the state managing agencies to voluntarily comply with the spirit of section 106.
8 — 8. There is a provision on Page 74 that local governments in the *rivertown* and in the *small town historic* areas would be required to adopt and enforce historic preservation ordinances. These ordinances should be required of local governments in all management areas. There are historic properties that need protection throughout the riverway.	8. While it would be commendable for all riverway communities to adopt historic preservation ordinances, it is required only in the river town and small town historic districts.
9 — 9. Provisions need to be made in the management structure for adequate cultural resource expertise in the continuing management of the riverway.	9. The text on page 73 of the draft plan has been revised to clarify that all three managing agencies should take better advantage of their internal expertise on cultural resources.
10 — 10. The discussion on recreational use, beginning on Page 146, should include a substantive discussion of heritage tourism as a primary recreational activity for visitors to the riverway.	10. The text has been revised to include a discussion of heritage tourism.
11 — 11. The section on cultural resources which begins on Page 171 needs more development. The section begins with a general historical overview, and then includes a brief statistical summary of previous archaeological surveys and a general description of current or anticipated efforts to identify cultural landscapes	11. The text on page 173 of the draft plan has been corrected, and a section on historic structures has been added.

	COMMENTS	RESPONSES
	and ethnographic resources. There is no overall discussion of the types of historic properties found in the riverway, or of the nature and significance of the specific properties which have been already evaluated and listed on the National Register within the riverway boundaries. There is no mention of the National Park Service survey of historic properties which was completed in the 1970's. There is no discussion of management and treatment issues. Much of this type of information should be readily available from the historic resource study, the list of classified structures study, and the cultural landscape inventory, all of which are currently underway (p. 73).	
12	12. The section on impacts on cultural resources (p. 205) needs to incorporate historic preservation ordinances in all land management area classifications, as previously indicated under #8, above. This section indicates that management would work with a variety of other parties to address the needs of cultural resources adjacent to the riverway. However, attention also needs to be paid to cultural resources which are located within the riverway boundary but which are not owned by the management agencies. There needs to be much more discussion of potential actions which could be pursued to protect these resources; a simple statement that "preservation strategies" are needed is not specific enough.	12. See the response to comment 8, above.
13	13. The section on consultation with the SHPOs (p. 277) needs to address how all managing agencies, not just NPS, will work with the SHPOs.	13. The text has been revised to clarify that state riverway managing agencies would also consult with the SHPOs.
14	14. For future consultation, the following should be added to the list of agencies and organizations on Page 278: the Stillwater Heritage Preservation Commission, Stillwater City Hall, 216 N. 4th Street, Stillwater, MN 55082; the Afton Heritage Preservation Commission, Afton City Hall, P.O. Box 210, Afton, MN 55001-9780; Rivertown Restoration, Inc., P.O. Box 702, Stillwater, MN 55082; and the Preservation Alliance of Minnesota, International Market Square, Suite 54, 275 Market Street, Minneapolis, MN 55405-1621.	14. The organizations have been added to agency mailing lists.
15	15. The land use regulation guidelines (p. 283) include a general policy statement (bottom of first column) that addresses "......exceptional scenic and *natural* characteristics....." This section needs to include *cultural* and *historical* characteristics as well.	15. The text has been revised to include reference to cultural and historic resources.
16	16. The inventory of historic sites in Appendix F (p. 309) is not complete. Missing are at least eight individual properties on the Minnesota side of the river which are listed on the National Register of Historic Places and which are located within the riverway boundary. These properties are: the Cushing Hotel (Washington-Afton); the Mitchell Jackson Farmhouse (Washington-Lakeland); the John Oliver House (Washington-Lakeland); the Peet House (Washington-Stillwater); the Benjamin B. Sheffield House (Washington-May Township); the John Copas House (Washington-New Scandia Township); and the Paul Munch House (Chisago-Franconia Township). In addition, portions of the following National Register listed historic districts are located within the riverway boundaries: Stillwater Commercial Historic District (Washington-Stillwater); Marine on St. Croix Historic District (Washington-Marine on St. Croix); Franconia Historic District (Chisago-Franconia Township); and Angels' Hill Historic District (Chisago-Taylors Falls). There also may be properties which have been determined eligible within the boundaries. Some of the Minnesota properties included in the table are actually located outside the riverway boundary. Of course,	16. The text has been revised to include the information provided.

COMMENTS

there are many additional properties listed on the National Register that are located in close proximity to the riverway, but outside the riverway boundary, which are not included in the table.

17 17. The bibliography needs to include the major cultural resource surveys and studies that have been completed for the riverway.

We look forward to continuing to work with the various management agencies as this plan is completed and implemented. Please contact us at 651-296-5462 with questions or concerns.

Sincerely,

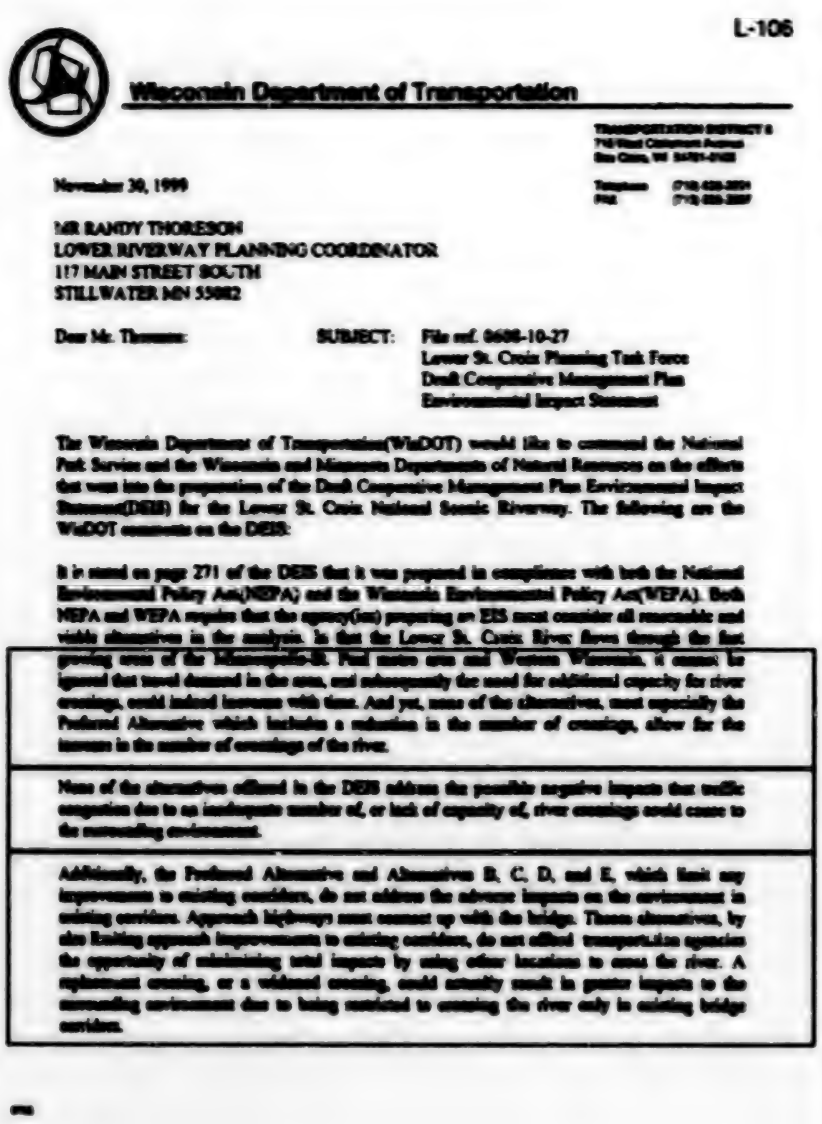
Dennis A. Gimmestad
Government Programs & Compliance Officer

cc: Sue Fitzgerald, Stillwater HPC
Jill Greenhalgh, Rivertown Restoration, Inc.
Twyla Goers, Afton HPC
Rick Bernstein, Wisconsin SHPO
Steve Johnson, MnDNR

RESPONSES

17. The bibliography has been corrected to include an additional reference. Other reports on archeological surveys exist, but they contain sensitive information about archeological sites protected under the Archeological Resources Protection Act and it would be inappropriate to reference them in the bibliography.

COMMENTS



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Wisconsin Department of Transportation

TRANSPORTATION DISTRICT 6
718 West Clairemont Avenue
Eau Claire, WI 54701-[illegible]

Telephone (715) [illegible]
FAX (715) [illegible]

November 30, 1999

MR RANDY THORESON
LOWER RIVERWAY PLANNING COORDINATOR
117 MAIN STREET SOUTH
STILLWATER MN 55082

Dear Mr. Thoreson:

SUBJECT: File ref. 0608-10-27
Lower St. Croix Planning Task Force
Draft Cooperative Management Plan
Environmental Impact Statement

The Wisconsin Department of Transportation(WisDOT) would like to commend the National Park Service and the Wisconsin and Minnesota Departments of Natural Resources on the efforts that went into the preparation of the Draft Cooperative Management Plan Environmental Impact Statement(DEIS) for the Lower St. Croix National Scenic Riverway. The following are the WisDOT comments on the DEIS:

It is stated on page 271 of the DEIS that it was prepared in compliance with both the National Environmental Policy Act(NEPA) and the Wisconsin Environmental Policy Act(WEPA). Both NEPA and WEPA require that the agency(ies) preparing an EIS must consider all reasonable and viable alternatives in the analysis. In that the Lower St. Croix River flows through the fast 1 growing areas of the Minneapolis-St. Paul metro area and Western Wisconsin, it cannot be ignored that travel demand in the area, and subsequently the need for additional capacity for river crossings, could indeed increase with time. And yet, none of the alternatives, most especially the Preferred Alternative which includes a reduction in the number of crossings, allow for the increase in the number of crossings of the river.

2 None of the alternatives offered in the DEIS address the possible negative impacts that traffic congestion due to an inadequate number of, or lack of capacity of, river crossings could cause to the surrounding environment.

3 Additionally, the Preferred Alternative and Alternatives B, C, D, and E, which limit any improvements to existing corridors, do not address the adverse impacts on the environment in existing corridors. Approach highways must connect up with the bridge. These alternatives, by also limiting approach improvements to existing corridors, do not afford transportation agencies the opportunity of minimizing total impacts by using other locations to cross the river. A replacement crossing, or a widened crossing, could actually result in greater impacts to the surrounding environment due to being restricted to crossing the river only in existing bridge corridors.

RESPONSES

1. See the response to Metropolitan Council comment 4.
2. See the response to Metropolitan Council comment 4.
3. See the response to Metropolitan Council comment 4.

COMMENTS	RESPONSES
Mr. Randy Thoresen November 30, 1999 Page 2 of 2	
4 There is a possibility for some confusion between the narratives under "RIVER CROSSINGS" for the various alternatives and the summary for the alternatives on page 132. The narrative for the Preferred Alternative states that the number of "river" crossings should be reduced while the comparison states that the number of "bridge" crossings would not increase. It would be helpful to use just "river" crossings or "bridge" crossings or fully explain that "bridge" crossings is a subset of "river" crossings.	4. River crossings are defined on page 67 of the draft plan. There is no discussion of river crossings on page 132 of the draft plan; the text on page 134 of the draft is consistent with the definitions on page 67.
5 Wisconsin State Trunk Highway 64 going easterly from Minnesota Trunk Highway 36 at Stillwater to New Richmond and points east is missing from the base map that was used for many of the maps in the DEIS.	5. See the response to Minnesota Department of Transportation comment 8.
The WisDOT wholeheartedly agrees with the proposal in the DEIS of "better coordination, communication, and cooperation, and integrated management and planning between the riverway managing agencies and the federal, state, and local governments." The WisDOT appreciates the opportunity to comment on the DEIS for the Lower St. Croix National Scenic Riverway. Sincerely, Terry C Pedersen Terry C Pedersen, P.E. District Planning Projects Engineer	

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L-94

State Historical Society of Wisconsin
816 State Street • Madison, Wisconsin 53706-1482 • 608/264-6400 • Fax: 264-6404
Division of Historic Preservation
[illegible]

November 29, 1999

Mr. Randall Thoresen
Lower St. Croix Planning Coordinator
Coordination Office
117 Main Street
Stillwater, MN 55082

IN REPLY PLEASE REFER TO SHSW # 96-0388/PI/PK/SC
RE: Draft Cooperative Management Plan/Environmental Impact Statement;
Lower St. Croix National Scenic Riverway

Dear Mr. Thoresen:

The State Historical Society of Wisconsin is in receipt of the National Park Service's *Draft Cooperative Management Plan/Environmental Impact Statement for the Lower St. National Scenic Riverway*. We understand that this was prepared in response to the 1995 Nationwide Programmatic Agreement with the National Park Service, the National Conference of State Historic Preservation Offices and the Advisory Council. This Plan will provide the NPS and its cooperating agencies with the general guidance necessary for the management of the Lower St. Croix Riverway for the next generation. Although the State Historical Society of Wisconsin has not been actively involved in formulating the Plan up to this point, we would like to take this opportunity to add our comments before you finalize the Plan and the Environmental Impact Statement.

Land Management Areas

We heartily endorse the concept of creating seven separate land management areas, in particular the provisions creating a new management approach for land areas designated as "rivertown" and "small town historic." We believe that this approach makes a great deal of common sense and should prove very helpful in preserving historic resources within incorporated communities along the Riverway. We would like to point out that three of the five incorporated communities (Osceola, North Hudson and Prescott) on the Wisconsin side of the river already have historic preservation ordinances and additional legislation may not be necessary, but that Hudson and St. Croix Falls currently do not.

Hudson and North Hudson have both been intensively surveyed, while Prescott, Osceola and St. Croix Falls have not. Survey grants are available from this office for intensive surveys of unsurveyed communities, such as the three listed above. It is also possible that the Wisconsin DNR, the West Central Regional Planning Authority, or some other

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To Enhance Understanding and Appreciation of Our Local, State and National Heritage

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Lower St. Croix National Scenic Riverway
Page 2

agency or non-profit would be eligible for a grant from the State Historical Society to survey the resources along the rural stretches of the Riverway as well, something we believe to be advisable.

1 The other land management areas within the Plan stress the conservation of the natural environment, which we believe to be an admirable goal. Provisions should be made, however, that promote the preservation of isolated historic resources within otherwise rural/natural/primitive areas within and adjacent to the Riverway. For instance, we would not advocate the removal of a historic log cabin solely in an effort to return an area to its original natural state. In such an instance, we would hope that each of these public benefits would be weighed accordingly before a decision is reached.

Management Organization

We note that the Riverway's Management Organization fails to include anyone with a
professional experience in cultural resources. To our knowledge the St. Croix Riverway
office of the NPS does not currently have a cultural resource specialist on staff. It seems,
therefore that the Management Team will need to rely on NPS regional historians, paid
consultants and the two SHPOs for the adjoining states to further any of their cultural
2 resource-related management objectives. We would ask that the preferred arrangement
between the Riverway's management organization and cultural resource specialists be
more fully detailed in the body of the Plan.

3 In addition, for the management team to effectively manage the cultural resources within and adjacent to the Riverway the first essential step is to develop an inventory of the historic and cultural resources within that management area. Such an inventory should include all the various types of resources potentially eligible for listing in the National Register of Historic Places. This should include at minimum A) archeological sites, B) historic structures and buildings, C) traditional cultural properties, D) cultural and designed landscapes and E) underwater resources.

The State Historical Society of Wisconsin has a great deal of information on archeological, historic and underwater resources, but not as much on landscapes and traditional cultural properties. A records check of the recorded sites/structures in our various inventories and databases could be collected and transferred to the NPS upon request. We recommend that this information be collected and kept on hand as a regular reference for future planning and management purposes.

Once records check has been completed, we would also recommend that the National Park Service and the two Departments of Natural Resources undertake a comprehensive field survey of cultural resources within the Riverway. Although the Plan mentions that

To Enhance Understanding and Appreciation of Our Local, State and National Heritage

1. Comment noted.

2. See the response to Minnesota Historical Society comment 9.

3. See the response to Minnesota Historical Society comment 2.

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COMMENTS

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Lower St. Croix National Scenic Riverway
Page 3

several efforts are underway, current efforts by the NPS seem to be limited to NPS-owned properties. We believe that this approach is overly limited and therefore less useful than it should be if it included non-NPS owned properties.

We therefore strongly recommend that a comprehensive survey of the Riverway become a major primary management objective. We understand that this is a large land area that can not be easily or quickly completed. But the need for a comprehensive survey is absolutely essential for the successful management of cultural resources within the Riverway.

4 Also, the NPS should consult with the two SHPOS to update Appendix F to ensure its accuracy and completeness in terms of including all the properties either listed in the National Register or formally determined eligible for listing. We would also recommend that the Wisconsin DNR consider undertaking a comprehensive survey of their own lands as we already mentioned above. Funds from this office might be available to defray the costs of such a survey.

5 Long term we would suggest that the Management Organization advocate for the creation of a full time position devoted to Cultural Resource management.

Heritage Tourism

The State Historical Society was recently a recipient of an ISTEA enhancement grant from the Wisconsin Department of Tourism. A large scale-planning document was produced that highlighted the various cultural resources along the Wisconsin stretch of the Great River Road. Copies of this brochure might still be available from Marty Beekman, District 5, WisDOT at (715) 343-9545. We believe that this document should prove useful as a model for a similar effort along the Lower and perhaps the Upper St. Croix Riverways.

Cultural Resources

6 We found the Section devoted to Cultural Resources disappointing. Although it briefly summed up the history of the St. Croix River Valley, it failed to document the distinctive connection that exists between the river and the various communities that developed alongside. This unique local perspective forms at least part of the rationale for the land management areas so prominently included in this Plan. It should be noted that many, if not most, of the communities located on the St. Croix River are named within a river context with names like *Stillwater, St. Croix* and *Taylor Falls, Hudson* (so named because the river reminded the town founder of the Hudson River and his native New York), *Marine on St. Croix*, etc.

To Enhance Understanding and Appreciation of Our Local, State and National Heritage

RESPONSES

4. See the response to Minnesota Historical Society comment 16.

5. Implementation costs identified in the plan include inventory funds but not funds for a staff position.

6. See the response to Minnesota Historical Society comment 11.

COMMENTS

\Thomsen
Lower St. Croix National Scenic Riverway
Page 4

Consultation with SHPOs and the Advisory Council

7 In reviewing the distribution list we note that the local landmark commissions in Osceola, North Hudson and Prescott and other local historical societies within the various communities and counties located within the Riverway were not mentioned. We would recommend that copies of this Draft Plan be provided to them and that the comment period be extended a reasonable amount of time for any response they may have.

8 We would also note that the federal regulations implementing Section 106 of the National Historic Preservation Act of 1966 has been extensively revised as of June of this year. Although the Nationwide PA is still valid, the relationship between the SHPO and each unit of the National Park Service will change somewhat. That could be more fully explained in the this section of the Plan.

We hope these comments will prove useful to you in your efforts to manage this important nationally significant resource and we look forward to working with you in this regard. If you have any questions, I can be reached by phone at (608) 264-6506 or by e-mail at rbernstein@mail.shsw.wisc.edu.

Sincerely,
Richard A Bernstein
Richard A. Bernstein
Historian, Compliance Section

Cc: Dennis Gimmestad
Government Programs and Compliance Officer
State Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd.
St. Paul, MN 55102-1906

To Enhance Understanding and Appreciation of Our Local, State and National Heritage

RESPONSES

7. The organizations have been added to agency mailing lists.

8. As noted on page 277 of the draft plan, consultation would be consistent with current federal regulations. Reference to the 1995 agreement has been deleted.

COMMENTS

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Mayor
Jerry Kellogg

City Administrator
Larry Whitaker

Council Members
Ward 1 - Pat Tierney
Ward 2 - Gary Swenson
Ward 3 - Pat Snyder
Ward 4 - Mark Borgwardt

August 17, 1999

Mr. Randy Thoreson, Coordinator
Lower St. Croix Planning Task Force
117 Main Street
Stillwater, MN 55082

RE: Draft Cooperative Management Plan

Dear Mr. Thoreson:

The City of Afton has been reviewing the Comprehensive Plan and Ordinances governing the Village Historic Site since early 1996. The City Council and Planning Commission agreed that these were so restrictive that the future viability of this area was in jeopardy. We worked with an ad hoc committee of concerned residents and business owners, as well as the Afton Business Association, to develop amendments to them. We believed these would help restore and preserve the area within the framework of the Lower St. Croix River Bluffland and Shoreland Management Ordinance adopted in 1974.

We have been discussing the proposed amendments to the Comprehensive Plan and our Ordinances with Molly Shodeen since early 1998; and, we submitted the proposed amendments to her in June 1998. We conducted the required Public Hearings in late 1998 and early 1999 after the required notice to the public and the Minnesota Department of Natural Resources. After considerable discussion, we adopted the revised Comprehensive Plan and several amendments to the Ordinances that would simply permit many of the uses that were permitted in 1974 – in the areas where they were permitted in 1974.

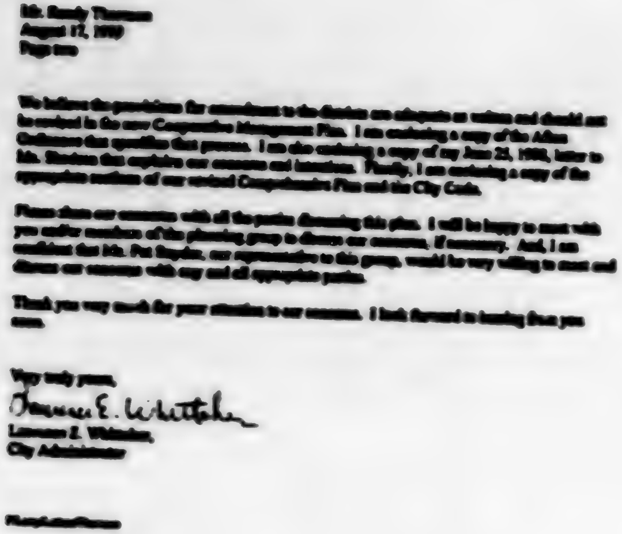
The Metropolitan Council has now approved the revised Comprehensive Plan. These amendments to the Ordinances have been adopted, published and become a part of the City Code. And, the City of Afton is satisfied that we have provided sufficient flexibility to the property owners within the Village Historic Site that the "old Village" can survive.

1 Now, we learn that the Joint Planning Commission is considering amendments to the Cooperative Management Plan that would effectively nullify our Plan and Code. In our opinion, the effect of the proposed amendments to the Cooperative Management Plan would be to gradually eliminate the very buildings and uses that give character to these historic districts. We believe the commercial uses and buildings must be maintained and allowed to expand in Afton and Marine on St. Croix if the cities are to retain that character.

City of Afton – 3033 St. Croix Trail So. Box 219; Afton, MN 55001
(651) 436-5090 Fax (651) 436-1453

RESPONSES

1. The plan has been changed to ensure the continued viability of the downtown commercial districts of Afton, Marine on St. Croix, and Osceola, as well as the existing industrial facility in Bayport.



Mr. Randy Thomas
August 17, 1999
Page two

We believe the provisions for amendment to the district are adequate as written and should not be revised in the new Cooperative Management Plan. I am enclosing a copy of the Atlas Ordinance that specifies that process. I am also enclosing a copy of my June 23, 1998, letter to Ms. Stratton that explains our concerns and intentions. Finally, I am enclosing a copy of the appropriate sections of our revised Comprehensive Plan and the City Code.

Please share our concerns with all the parties discussing this plan. I will be happy to meet with you and/or members of the planning group to discuss our concerns, if necessary. And, I am confident that Mr. Pat Snyder, our representative to this group, would be very willing to meet and discuss our concerns with any and all appropriate parties.

Thank you very much for your attention to our concerns. I look forward to hearing from you soon.

Very truly yours,

Lawrence E. Whitaker,
City Administrator

[illegible]

COMMENTS	RESPONSES

Sec. 12-978. Existing codes.

(a) The provisions of this article are in addition to and not in replacement of the provisions of the zoning ordinance, article II of this chapter. Any provisions of the zoning ordinance, article II of this chapter, relating to the Lower St. Croix Riverway shall remain in full force and effect except as they may be contrary to the provisions of this article.

(b) In the village historic site (VHS) district of this article designated in section 12-926, existing zoning districts in effect and uses permitted on May 1, 1974, by article II of this chapter may again be permitted by the city council by special use permit, subject to the provisions of Minn. Rules, § 6105.0550, subp. 3 and approval in writing by the commissioner of natural resources, if they meet the following standards:

(1) The proposed use is consistent with and complementary to the existing, adjacent, urban land uses and municipal plans.

(2) The dimensional requirements of section 12-927.

(3) The shoreland setbacks and frontage requirements of the zoning ordinance, article II of this chapter.

(4) A parking layout and site plan which provides on-site, off-street parking spaces for all employees of the project, an exclusive area for loading docks where required by local ordinance, and off-street customer parking spaces as required by local ordinance.

(5) An on-site grading and surface water run-off plan for the site which minimizes soil erosion and degradation of surface water quality.

(6) In sewered areas, public sewer will service the proposed project.

(7) A landscaping plan for the site is illustrated which minimizes the visual impact of the proposed project as viewed from the river and which visually screens all parking areas from the river. The applicant shall provide the city with a performance bond for the cost of all landscaping to insure compliance with the landscaping plan.

(8) A public hearing as per section 12-931 and forwarding of the final action of the local community to the commissioner of natural resources within ten days of the final action.

(9) The project meets all other existing local zoning and subdivision requirements.

(10) The project requires no alteration or fill of shoreline, bluffland, or floodway, except for temporary docking and launching of watercraft.

(11) No lighted or flashing signs shall face riverward.

(12) Detailed plans and specifications as presented at the public hearing are sufficient to obtain all local access, building, zoning, and sewer permits.

(c) The following listed village historic site (VHS) district special uses are considered special uses:

(1) Seasonal business

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CITY OF BAYPORT

294 North 3rd Street
Bayport, Minnesota 55003-1007

Phone: (651) 439-2530

November 5, 1999

Randy Thoresson
Lower Riverway Planning Coordinator
117 Main Street South
Stillwater, Minnesota 55082

Dear Randy:

At the Bayport City Council Meeting of Monday, November 1, 1999, the City Council reviewed the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Impact Statement. Following the City Council's review, the Council adopted a resolution commenting on the Draft Cooperative Management Plan. Specifically, the Council took action to recommend the Minnesota Department of Natural Resources, the Wisconsin Department of Natural Resources and the National Park Service change the Lower St. Croix National Scenic Riverway Draft Cooperative

1 Management Plan, Appendix A, Land Use Regulations. to permit the following uses in "Small Town" District:

1. Single Family Structures.
2. Multi-Family Uses.
3. Existing Zoned Commercial Uses.
4. Existing Zoned Industrial Uses.

2 In addition, the City Council took action to recommend the Boundary Water Line within the City of Bayport to move further to the east. I have included a map showing the boundary change.

Additionally, I have enclosed a copy of Resolution No. 99-125 which outlines the City Council's official positions and comments related to the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Impact Statement.

1. See the response to Afton comment 1.

2. The plan has been revised to identify a recommended change in the riverway boundary in Bayport. While the managing agencies favor a slightly different boundary adjustment than proposed by the city, the Lower St. Croix Management Commission would take action on specific boundary changes after completion of this plan.

Should you have any questions about the contents of this letter or the enclosed information, please contact me at (651) 439-2530.

Sincerely yours,

Kenneth H. Hartung
City Administrator

cc: Mayor and Councilmembers
Molly Shodeen, MN DNR
Steve Johnson, MN DNR
Jack Piepel, Andersen Corporation

RESOLUTION NO. 99- 125

EXTRACT OF THE MINUTES OF MEETING OF THE CITY COUNCIL OF THE
CITY OF BAYPORT, WASHINGTON COUNTY, MINNESOTA
HELD November 1, 1999

Pursuant to due call and notice therefore, a regular meeting of the City Council of the City of Bayport, Minnesota was duly held at the Bayport City Hall in said municipality on the 1st day of November, 1999, at 7:00 PM.

The following members were present:
Councilmembers Ridgway, Menard, Newell, Schultz and Kosmo

and the following members were absent:
None

Member Newell introduced the following resolution and moved its adoption:

RESOLUTION CITY OF BAYPORT, WASHINGTON COUNTY, MINNESOTA, REQUESTING THAT THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES, THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES AND THE NATIONAL PARK SERVICE CHANGE THE LOWER ST. CROIX RIVER NATIONAL SCENIC RIVERWAY DRAFT COOPERATIVE MANAGEMENT PLAN, APPENDIX A: LAND USE REGULATION GUIDELINES FOR SMALL TOWN DISTRICTS TO PERMIT USES TO INCLUDE SINGLE FAMILY STRUCTURES AND EXISTING COMMERCIAL, INDUSTRIAL AND MULTI-FAMILY ZONED USES AND CHANGE THE LOWER ST. CROIX NATIONAL SCENIC RIVERWAY DRAFT COOPERATIVE MANAGEMENT PLAN BOUNDARY AREA WITHIN THE CITY OF BAYPORT

WHEREAS: The City of Bayport has received a copy of the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan and Environmental Impact Statement, and;

WHEREAS: The City Council has reviewed the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Impact Statement, Page 62, which states, that the City of Bayport is designated as a "Small Town" Management Area within the Draft Cooperative Management Plan, and;

WHEREAS: The City Council of the City of Bayport has reviewed the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Impact Statement, Appendix A, Land Use Regulation Guidelines which states that the City of Bayport is designated "Small Town" and that such designation will permit only land uses associated with single family structures and existing commercial and multi-family uses, and;

WHEREAS: In 1996 the City of Bayport went through extensive Public

COMMENTS | **RESPONSES**

Hearings to revise its Comprehensive Plan and the citizens of Bayport and the Bayport City Council reaffirmed that the area along the St. Croix River zoned Industrial for use of the Andersen Corporation should continue to be maintained as an Industrial Zoned area, and;

WHEREAS: On July 1, 1996, the City of Bayport adopted Resolution 96-60, Approving the City of Bayport's Comprehensive Plan and that the City's approved Comprehensive Plan specified the Industrial Zoned area owned by the Andersen Corporation along the St. Croix River shall continue to be zoned Industrial, and;

WHEREAS: The City of Bayport received a letter dated September 5, 1996, from Tom McElveen, Deputy Director, at the Metropolitan Council stating that the City of Bayport's Comprehensive Plan including the Industrial Zoned areas within the Plan are consistent with the Regional Systems including aviation, recreation open space, transportation, waste water treatment and handling, as well as the Regional Blueprint and other adopted chapters of the Metropolitan Development Guide, and;

WHEREAS: If the land use restrictions prohibiting Industrial Zoning within the City of Bayport as stated in the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Impact Statement, Appendix A, is enacted as policy, it will not permit the existing Industrial Zone for the Andersen Corporation to continue and under the new regulations, the Andersen Corporation will not be able to significantly improve its structures or expand it operation on the land which is currently zoned Industrial and, furthermore, if any part of its manufacturing complex is destroyed by fire or flood, the Andersen Corporation would not be able to replace the damaged structures, and;

WHEREAS: If the land use restrictions prohibiting Industrial Zoning within the City of Bayport as stated in the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan and Environmental Impact Statement, Appendix A, are enacted as a policy, it will likely result in the Andersen Corporation to moving its manufacturing operation to other locations, including the possibility of the corporation locating major components of the corporation's manufacturing out of state, and;

WHEREAS: The Andersen Corporation has over the course of the years taken steps to minimize the effect of its industrial operation on the environment including that of the St. Croix River, and;

WHEREAS: The City Council of the City of Bayport has also reviewed the Bluff land Shoreland boundaries within the City of Bayport and has determined that a section of the Bluff land Shoreland Management Area designated within the City of Bayport should be removed from the Bluff land Shoreland Management Area because the area is zoned R-4 Single Family Residential and is not visible from the St. Croix River, and, consequently, the City Council of the City of Bayport is recommending moving the existing Bluffland Shoreland Area west boundary line from South 4th Street between 6th Avenue South and Central Avenue to Highway 95 from Central Avenue to 6th Avenue South.

NOW THEREFORE BE IT RESOLVED: By the City Council of the City of Bayport, Washington County, Minnesota, does hereby ordain as follows:

1. That the Minnesota Department of Natural Resources, Wisconsin Department of Natural Resources and the National Park Service is hereby requested to amend the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Statement, Appendix A, Land Use Regulation Guidelines for Small Town Districts to permit the following uses:

   A. Single Family Structures.
   B. Multi-Family Uses.
   C. Existing Commercial and Industrial Zoned Uses.

2. That the Minnesota Department of Natural Resources, Wisconsin Department of Natural Resources and the National Park Service is hereby requested to amend the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Impact Statement boundary area to move the existing Bluff land Shoreland Area west boundary line from South 4th Street between 6th Avenue South and Central Avenue, to Highway 95 from Central Avenue to 6th Avenue South.

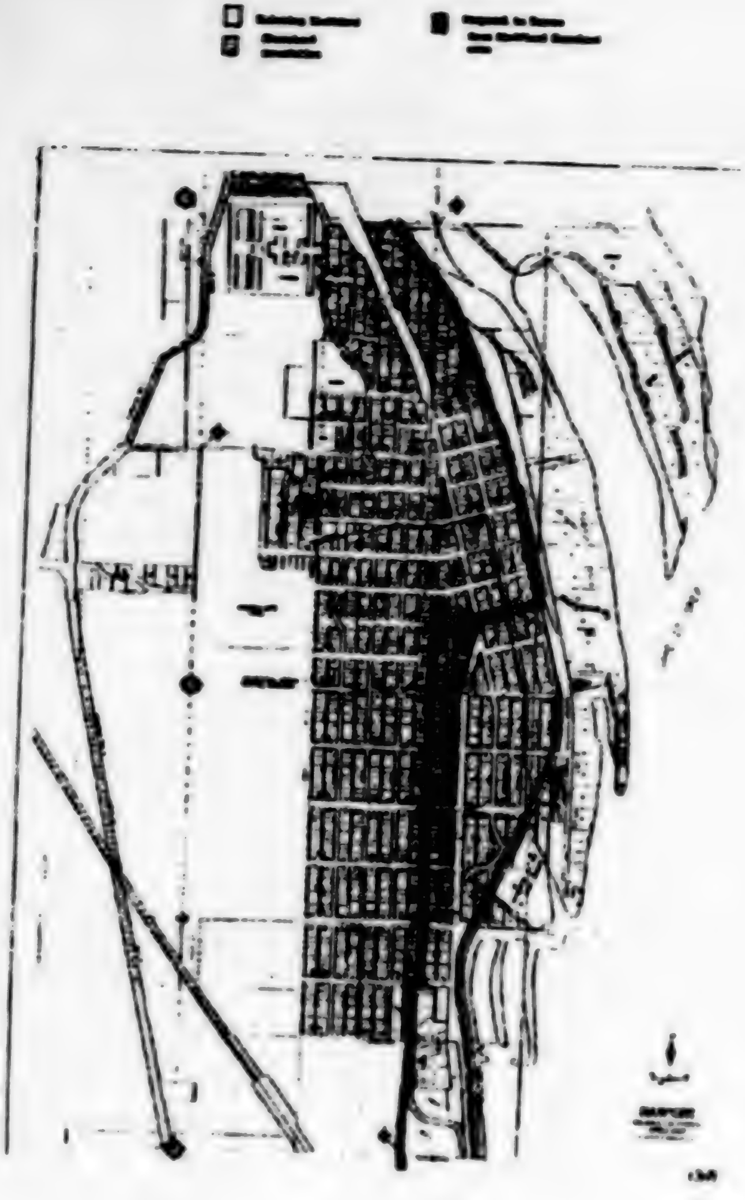
The motion for adoption of the foregoing resolution was duly seconded by Member Kosmo and upon roll call being taken thereon, the following voted via voice:

Jim Menard - aye	Sharon Ridgway - aye
Linda Newell - aye	Allen Schultz - aye
Jim Kosmo - aye	

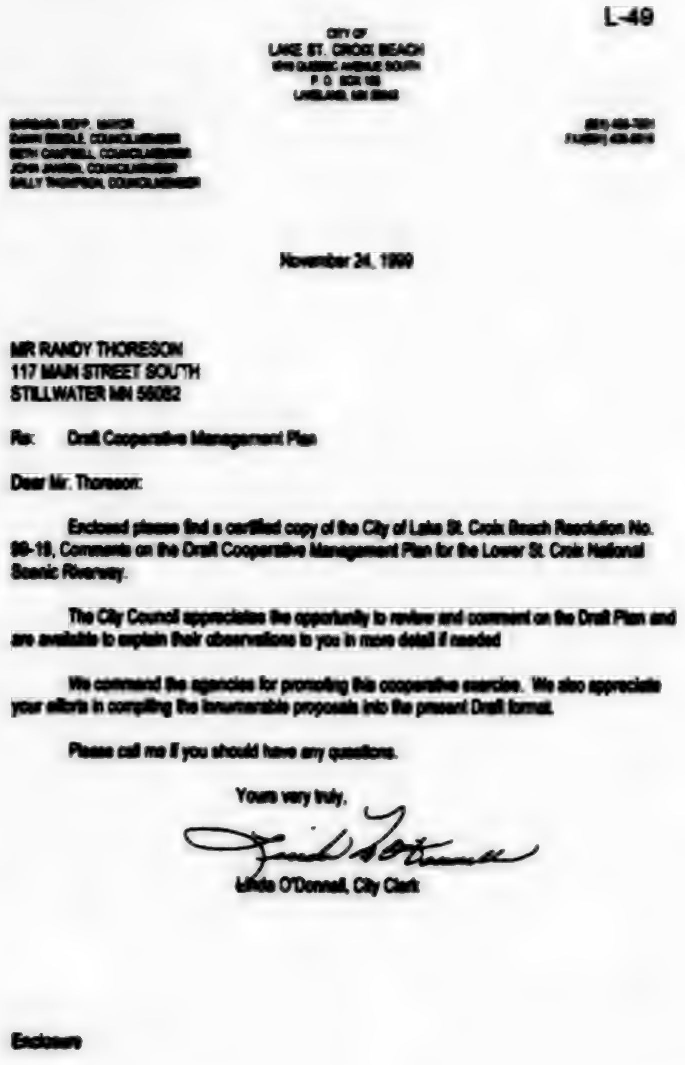
Thereupon said resolution was declared duly passed and adopted and signed by the Mayor and attested by the City Administrator. Passed by the City Council, City of Bayport, Washington County,

COMMENTS	RESPONSES
Minnesota at this 1st day of November, 1999. Attest: [illegible] H. Hartung City Administrator Allen R. Schultz, Mayor	

COMMENTS



RESPONSES



L-49

CITY OF
LAKE ST. CROIX BEACH
[illegible] QUEBEC AVENUE SOUTH
P.O. BOX [illegible]
LAKELAND, MN [illegible]

BARBARA [illegible], MAYOR
[illegible], COUNCILMEMBER
BETH CAMPBELL, COUNCILMEMBER
JOHN [illegible], COUNCILMEMBER
SALLY THOMPSON, COUNCILMEMBER

[illegible]
FAX [illegible]

November 24, 1999

MR RANDY THORESON
117 MAIN STREET SOUTH
STILLWATER MN 55082

Re: Draft Cooperative Management Plan

Dear Mr. Thoreson:

Enclosed please find a certified copy of the City of Lake St. Croix Beach Resolution No. 99-18, Comments on the Draft Cooperative Management Plan for the Lower St. Croix National Scenic Riverway.

The City Council appreciates the opportunity to review and comment on the Draft Plan and are available to explain their observations to you in more detail if needed.

We command the agencies for promoting this cooperative exercise. We also appreciate your efforts in compiling the innumerable proposals into the present Draft format.

Please call me if you should have any questions.

Yours very truly,

Linda O'Donnell, City Clerk

Enclosure

Councilmember Campbell introduced the following Resolution and moved its adoption.

CITY OF LAKE ST. CROIX BEACH
WASHINGTON COUNTY, MINNESOTA
RESOLUTION 99-19

AND COMMENTS ON THE
DRAFT COOPERATIVE MANAGEMENT PLAN
LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

BE IT RESOLVED by the the City Council of the City of Lake St. Croix Beach that LSCB commends and applauds the managing agencies for their vision, faith, and optimism in choosing and using such an inclusive, collaborative, positive consensus-building process that recognizes the diversity of viewpoints among the many stakeholders in the ongoing stewardship of the riverway. We join many other participants in our genuinely pleasant surprise at how well the process worked over many months and years of cooperative effort at the extent and scope of the areas on which consensus was reached, and at the adoption by the Management Commission of the many consensus-based issue resolutions which were achieved.

Our City takes its very name from the 75 year old plat of Lake Saint Croix Beach, which celebrates the founders' discovery of the recreational and residential amenities of Lake St. Croix, and particularly our precious sand beach. Long before the city came into existence as a political entity, the community of families owning property here fell in love with our river, and enthusiastically enjoyed and protected it. Today the City is the riparian owner of almost a mile of shoreland and blufland, in trust for its residents. The City itself, as well as its citizens, see ourselves all as stewards of the unique St. Croix Riverway.

The City generally supports the preferred alternative in the Draft Plan; however, we respectfully offer the following suggestions and comments:

Designation as Small Town Pages 51, 61

1 Object to City of Lake St. Croix Beach being designated "Small Town." The "Small Town Historic" designation better defines this City.

We do not have "primarily large lots" and therefore cannot and should not be limited to "new development provided the existing large-lot, single family character of the areas do not change."

Management Structure Options - Land Use Management Page 119

Favor: "no riverway managing agency would have veto authority over the local government's decision."

1

1. While lot size in Lake St. Croix Beach does not reflect the general description of the "small town" district, all other aspects of the community are consistent with the district. The city does not have the historic character emblematic of the "small town historic" district.

COMMENTS	RESPONSES
We have seen property owners experience confusion and frustration after receiving City approval for a project only to have another agency then override the local decision. Although many agencies have an interest in the Riverway and view its management from their perspective, it is the local elected officials who should have the authority to decide local issues. Object in general to adding another agency to the administration of the Riverway, but like the concept of the new Lower St. Croix Partnership. Administering the Riverway will continue to be laborious and confusing with these layers (as listed below) of controlling authority, but at least the addition strengthens the balance between local control and distant bureaucracy. City of Lake St. Croix Beach Lower St. Croix Partnership Team Minnesota-Wisconsin Boundary Area Commission Lower St. Croix Management Commission Minnesota Department of Natural Resources National Park Service Land Use Regulation Guidelines (Appendix A) Pages 283-284	
2 Object to the definition of Net Project Area if it results in creating sub-standard lots by eliminating certain land areas that previously allowed the parcel to meet minimum lot size requirements. *Not certain in what context this term will be used. No objection if Net Project Area really means "area within a parcel where development may take place." We assume this is not a tool to reduce lot sizes.*	2. The plan states that minimum lot size in the "small town" district would be determined by the local government's underlying zoning. The definition of "net project area" is not applicable to Lake St. Croix Beach.
3 Object to Minimum Lot Width of 100 ft. *This conflicts with LSCB Zoning Code in the R-3 District that required minimum lot size but does not require a minimum lot width. It would be impractical to have such a requirement because the City is essentially fully developed in the Riverway District. There is little available undeveloped land to allow property owners to fulfill this requirement.*	3. A minimum lot width requirement of 100 feet in the "small town" district is reasonable. The current Minnesota rules require a minimum lot width of 100 feet in sewered areas and 150 feet in unsewered areas. Many lots in Lake St. Croix Beach do not meet those current standards.
Favor the statement that dimensionally substandard structures that contain permitted uses may be retained, improved and expanded if steps are taken to mitigate for visual impact and for adverse impact on the water quality in the river. *This is consistent with LSCB practice to allow property owners to improve the housing stock in the City, including Riverway District, when certain health and safety issues are addressed, including connecting to municipal water system and upgrading septic system.*	

COMMENTS

4 Object to permitting only single family residential uses; object to prohibition that no new multi-family or commercial uses would be permitted; clarify that existing multi-family and commercial uses may continue with Conditional Use Permit.

Currently the Bluffland/Shoreland Ordinance would allow conditional uses, if approved by the City.

Vegetation Management Pages 65, 164, 284

5 Object to the stated primary vegetative management goal "to screen structures from view as seen from the river . . ."

LSCB has nearly one mile of residential uses facing the river. Most of these structures were constructed before the St. Croix was designated a protected riverway. When viewed from the river, the length of the City shows as a residential neighborhood - not as a rural, undeveloped stretch of land. It is the City's vegetative management practice to restore, protect, and preserve the erosion-resistant ground cover vegetative understory, including primarily native plant species, and also, where practicable, to create and maintain a reasonable vegetation canopy in the Riverway District (but not necessarily on the riverward slope). As viewed from the river, or the land on the Wisconsin side, our City appears as a stretch of nicely maintained, middle-class family homes in a wooded bluffland setting, with an assortment of relatively small boats, power and sail, at docks and moorings along the shoreland, plus a public park with a beach, pavilion, and picnic facilities, all connected by a public street which invites leisurely traffic of all kinds. We believe it is a pleasant panorama of the uses of a residential/recreational riverfront, although it includes structures.

We believe that those owning, using, or just passing through on the land (public and private) should have the same opportunity to view the river, and the opposite shoreland and bluffland residential/recreational riverfront, including homes, boats, etc., also a pleasant panorama. Screening - total or partial - needs definition. It also needs explanation and clarification as to the justification for screening (or obstructing the view) looking from river toward land as compared with looking from land toward the river.

Favor policy that includes management of vegetation to encourage local plant communities and repair and improve erosion in shoreland and bluff areas.

LSCB has been a leader in identifying causes of erosion in steep bluffs and actively practices vegetation management to maintain and encourage protective ground cover in its Bluffland Park.

6 Object to restriction on disturbing vegetation on steep slopes and within 40 feet of the tops of blufflines.

This is not consistent with LSCB that has an established neighborhood in the Riverway with many property owners having chosen manicured yards rather than natural, undisturbed yards. Residential landscape preference is a personal issue, particularly on private property, separated by a street from the City-owned bluffland park. Property owners will continue to trim shrubs, remove, replant and alter their yards as is the usual practice in any residential setting.

3

RESPONSES

4. See the response to Afton comment 1.

5. The states, in development of land use regulations that will implement elements of this plan, are preparing a definition of screening and are developing language that protects views of the river from residences as well as views from the river.

6. Adequate flexibility in the state land use rules will allow yard maintenance in Lake St. Croix Beach. The referenced language has been in effect in Minnesota Rules since 1974 and has not prevented yard maintenance in this community.

319

COMMENTS

Water Use Management

- Slow & No Wake Zone Page 201

7 Object to establishing No-Wake Zone when river level reaches El 683. Change to El 681.

The LSCB Bluffland Park experiences erosion from waves and wakes below El 683, as well as above. To protect the fragile soils, No-Wake should be declared at El 681.

Boat Speed Page 69, 199, 290

The City of LSCB does not presently favor specific speed limits. However, the following comments are offered:

8 *Given that LSCB is located in the widest section of Lake St. Croix and that most boat traffic is near the navigable channel (about 1/2 mile from the Shoreland Park), is there a valid argument for the City to support boat speed limits? The statement that "A speed limit for powerboats would be imposed to ensure boater safety," is not true in every case. Different types of boats require different speeds to maintain steerage. A cruiser with a displacement hull can create a very large wake at slow speeds. These wakes can be a hazard to small craft, docks and shorelines.*

- *Actual speed (between points) is difficult to measure on water. Many boats are not equipped with a speedometer.*
- *If speed limits are adopted, they should be consistent with other metro area jurisdictions, particularly Lake Minnetonka; otherwise, "high performance" boats will be encouraged to "migrate" to where higher speeds are permitted.*
- *If speed limits are adopted, they should be uniform (except for existing slow-no wave zones) from north of Stillwater to Prescott. Differing speed limits would require many more (less than scenic) signs, and complicate enforcement by building in room for "misunderstanding" and confusion.*
- *In any event, with or without a specific speed limit, enforcement should be uniform and consistent throughout the Lower St. Croix National Scenic Riverway, for violation of safety issues (including unsafe speed) and noise issues under present law. The Law Enforcement on the St. Croix in recent years has largely depended on Washington County efforts, and otherwise has been intermittent, hit - and - miss, and uncoordinated as a whole. We believe the public safety of the riverway would best be served by a unified law enforcement authority with sufficient funding and staff to provide an adequate level of consistent enforcement of existing and/or new laws, to serve and protect all who use the riverway. Substantial improvement is needed.*

Boat Noise Page 291

9 Object to restricting noise limits to boats only. Noise controls should be more general or a least include sea planes, limits be consistent in both states, and enforceable in practice.

RESPONSES

7. See the response to Minnesota-Wisconsin Boundary Area Commission comment 6.

8. A speed limit of 40 mph in the daytime and 20 mph at night would be established between the north limits of Stillwater and the confluence with the Mississippi at Prescott. This is consistent with speed limits on Lake Minnetonka and Prior Lake.

9. Seaplane use is uncommon in the riverway, and regulation of seaplane use was not considered in development of the plan. Noise generated by watercraft, offroad vehicles, snowmobiles, and motor vehicles are regulated by statewide programs in both states.

Sea planes that are practicing take-offs and landings cause much more noise than boats, and for longer periods of time.

Access Controls & Density Issues, Page 290, 291

10 Object to proposal for some type of access control for riparian property owners (which in LSCB, is the City, not the individual boaters) odd-even day use, odd-even registration numbers, etc.

11 Query: at what location would density be measured to trigger this regulation? For example, Hudson narrows vs. Lake St. Croix - there is a big difference in number of boats vs. acres of water.

LSCB property owners have dedicated use of the river through its park system. These property owners have a vested personal and financial interest in using and caring for the river. It is their neighborhood. As a local, on-site population, they are the caretakers of the riverway - more so than the day use general public. The LSCB property owners also have the ability for discretionary use of the river - because of easy access to their watercraft, weekday rather than weekend boating is often a voluntary preference.

Marinas/Launch Ramps Page 291

An observation: The prohibition of new marinas, expansion at existing marinas and new launch ramps has caused the price of slip rentals to climb out of reach for the low and moderate income boater. It has created a very exclusive environment on the St. Croix National Scenic River. (NOTE: The City of LSCB limits moorings in its shoreland park to a discrete number of City residents, including "grandfathered" use).

12 Docks Page 291

Object to limiting dock to achieve depth of no more than four feet.

This is an ill-informed and unworkable rule. Keel boats often require more than four feet of water or they will be damaged from bouncing off the river bottom. Water levels can fluctuate and drop radically and suddenly. For safety purposes, it should be the responsibility of the dock owner to determine the depth of water at a dock.

We understand dock width and design issues are being discussed in the land use advisory group, for implementation in new appendices and regulations. LSCB City design standards have been provided.

Navigation Channel Maintenance Page 72

Favor maintaining a 9 ft. channel from Stillwater to Prescott.

13 Object to reducing the width of the navigable channel at Kinnickinnic from 200 ft. to 100 ft. because of safety issues.

3

10. Access controls of this type are not proposed in this plan. The referenced paragraph on page 290 of the draft plan has been deleted from the plan.

11. Boating density on the river is evaluated for 13 zones based on use patterns and geographic similarities. This is part of an ongoing monitoring program established in 1977 that is not discussed in this plan.

12. The text on page 291 has been revised to resolve these concerns.

13. Nonmotorized craft can operate outside the marked 9-foot-deep maintained channel, as can most motorized recreational vessels. Shoaling at the mouth of the Kinnickinnic River has not reduced the width of the 9-foot channel below the current 200 foot standard for many years, and it is unlikely dredging would ever be required if the 9-foot channel were allowed to be as narrow as 100 feet. Since there is a strong likelihood that the endangered Higgins eye pearly mussel has colonized the Kinnickinnic Narrows since the most recent dredging event, avoiding the need to dredge the channel in the future is a priority.

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PAGE

COMMENTS	RESPONSES

> *It is illogical to reduce the width of an already narrow channel that has constant watercraft traffic. This is not a light use area, but a regularly traveled course for boats going south to the county and state parks and Mississippi River or north to the other parks and river towns. This is already a no-wake zone area. A 100 ft. wide channel would place non-motorized canoes, sailboats, kayaks, etc. in very close proximity to large houseboats and cruisers that are often times difficult to control at these slow speeds.*

Navigation and safe access to the St. Croix and other waterways in this area date back to the Northwest Ordinance of 1787, before the Louisiana Purchase and the development of the Mississippi River system. Today on the St. Croix, navigation is primarily recreational, but channel maintenance remains essential, as does maintenance of aids to navigation. Although not directly related to the CMP, we note that the U.S. Coast Guard is proposing to discontinue maintaining floating aids to navigation (buoys) in the St. Croix, apparently to avoid responsibility for cleaning their equipment before entering the St. Croix, to prevent introduction of zebra mussels. This is ludicrous, and should be addressed by the Management Commission, and appropriate agencies.

The Motion for the adoption of the foregoing Resolution was duly seconded by Councilmember Jensen. The following vote was taken:

Councilmember Campbell	Aye
Councilmember Jensen	Aye
Councilmember Beedle	Aye
Councilmember Thompson	Aye
Mayor Kopp	Aye

WHEREUPON, said Resolution was declared duly passed and adopted.

Passed by the City Council of the City of Lake St. Croix Beach this 23rd day of November, 1999.

STATE OF MINNESOTA)

COUNTY OF WASHINGTON)

I, the undersigned, being the duly qualified and acting Clerk of the City of Lake St. Croix Beach, hereby certify that the attached and foregoing is a true and correct copy of Resolution No. 99-19 Comments on the Draft Cooperative Management Plan For Lower St. Croix National Scenic Riverway, Dated November 23, 1999, as the same is on file and of record in my office.

Dated this 24th day of November, 1999.

Lisa O'Donnell, City Clerk
City of Lake St. Croix Beach

SEAL

323

COMMENTS	RESPONSES

L-79

CITY OF MARINE ON ST. CROIX
BOX 250
MARINE ON ST. CROIX, MN 55047
651-433-[illegible]
City Council Members
Glen Mills 433-[illegible] Wis Miller 433-[illegible] Sherrill Reid 433-[illegible]
Robin [illegible] 433-[illegible] Scott Holloway 433-[illegible]

November 29, 1999

Mr. Randy Thoreson, Coordinator
Lower St. Croix Planning Task Force
117 Main Street
Stillwater, MN 55082

RE: Draft Cooperative Management Plan

Dear Mr. Thoreson

The City of Marine on St. Croix (The City) has reviewed the Draft Cooperative Management Plan Environmental Impact Statement (The Draft). The City assembled a review committee (The Committee) of considerable breadth, consisting of members from the City Council, Planning Commission and citizens at large. The committee concentrated on the position of the City vis a vis the preferred alternatives in the Land Use and Management Structure sections, plus Appendix A, assuming any responses to the Water Use sections would be made via other channels. Our concerns and intended actions are listed below. We ask that our concerns be taken seriously in the development and approval of the final plan.

General

The City is committed to The Draft plan and the process that the several levels of government have gone through to ensure the safety and preservation of the Lower St. Croix Riverway. Locally we find it is significant that the foremost policy section of the City's recently adopted Comprehensive Plan is titled "Natural Environment" and includes several policy statements which are protective of the riverway. The City's desire has always been to "partner" with the government bodies that oversee this wonderful environmental asset and to help them achieve their goals while still allowing local government influence.

The Committee agrees with the general approaches of the Land Use and Management sections and feels the riverway, and The City's relationship with the riverway, will be enhanced if these parts of the draft become the selected plan. However, The Committee has identified two major concerns with The Draft, one which may have significant impact on the identity and viability of The City, and the other having a potential adverse and seemingly unfair economic impact on the owners of certain buildings. These concerns are New Commercial Uses and Substandard Structures.

COMMENTS

Page 2
November 29, 1999

New Commercial Uses

The Committee was unable to find rationale in the text of The Draft for requiring that commercial uses be regulated as conditional uses.

The City Falls under the definition of "Small Town Historic" and as stated in The Draft, "new commercial...uses would not be allowed, but existing commercial...uses would become conditionally permitted uses and would not be 'non-conforming'." Such a policy has the potential for being extremely restrictive to our Village Center (the Comprehensive Plan term indicative of the dual commercial and social roles played by the center of the community). The Village Center was the location of the original Marine settlement 160 years ago and still maintains much of its historic character and a selection of early commercial buildings. While the Village Center is located inside the riverway boundaries, none of the businesses can be seen from the river. Indeed, the only property in the Village Center having riparian rights is owned by the Minnesota Historical Society and has no commercial activity.

The City as a community is quite dependent on the Village Center for its identity: visual identity as conferred by the major buildings, and social identity as conferred by its gathering and meeting type activities. These business and services (General Store, post office, bank, gas station, office spaces, etc.) are oriented toward serving the local community. Continuing the business and institutional services and maintaining the century-plus old buildings is quite dependent on being able to flow with the dynamics of today's business environment by incorporating new technologies and adapting to new uses. The City's visual identity relates strongly to the commercial and governmental buildings which are well over a century old, and are part of a National Historic District a is much of older Marine. Their future existence rests on active use to support continuing maintenance. The City believes that it is essential for new and modified commercial uses and expansion away from the river be permitted to continue the role of its Village Center.

1 The Committee was unable to find rationale in the text of The Draft for requiring that commercial uses be regulated as conditional uses. Also, the effect of such regulation was not treated in the discussions of the effects of the proposed plans. The conditional use requirements as stated in Appendix A seems to be without support in The Draft.

The City prefers to focus less on such rationale as it may or may not be in The Draft and more on City policies and Code requirements as the legally active elements which directly relate to the riverway. The City feels it can continue to maintain its Village Center and meet the intent of The Draft's requirements by restrictive zoning within the Center. The City's current code lists a limited number of "permitted" uses and is currently in the process of updating the code to include a list of "non-permitted" uses. Incorporating such a list has been recommended as a more effective legal tactic. The City feels that when these proposed changes are considered under the present review process or during the implementation of the Plan that the new uses will be found satisfactory.

RESPONSES

1. No change is proposed in the existing rules that have been in place since 1974.

COMMENTS

Page 3
November 29, 1999

2 Given the restrictive list of allowable uses and the review processes which are required to change commercial uses, the City suggests that there is little need for regulating all commercial uses as conditional uses. Defining uses through zoning would seem to provide primary protection. That protection, coupled with the responsibilities proposed in the management sections of The Draft, suggest that conditional use permitting, when it is appropriate, could be performed with full effectiveness at the local level.

Substandard Structures

The Committee found that an undue burden is being placed on riparian land owners by taking away their rights to rebuild in their existing foot print. A home is the single largest investment most people will make in their life time and that value and security could be taken away by The Draft plan.

The Draft defines Substandard Structures as any structure that does not meet the current riverway setback. This definition impacts about 90 percent of all the structures with riparian rights located outside of The Village Center.

There have been numerous discussions by the Lower St. Croix Advisory Committee concerning the impact to an owner of a substandard structure when the structure is negatively impacted by a peril. Many definitions have been tossed around with regards to what constitutes the total loss of a structure. The Committee has been considering defining a total loss as damage greater than 50 percent of the property.

A homeowner is required by a lender to provide property insurance to protect against the loss of a structure. The Minnesota Standard Fire Policy, as approved by the Commissioner of Insurance, lists nine perils that are excluded from all property insurance coverage. It is the exclusion for ordinance changes that concerns The City the most. Under that exclusion, a property owner's insurance policy would not cover the cost to move a current substandard structure (as defined in The Draft), that is destroyed by a peril, to the new setback requirements. The City does not believe that it is The Draft's intent to place a property owner in a position that it can not protect itself from financial hardship.

In the event that a property owner could afford to finance the movement of their home to meet the new setback requirements, many of the homes would be restricted by city zoning ordinances that require a 30 foot front yard set back. In the past the City has granted home owners, that wanted to expand an existing structure, variances, and in some extreme cases street vacations, to accommodate the current riverway setbacks. The City requests that The Plan protect riparian property owners with substandard structures against catastrophic loss by allowing an owner the right to rebuild their home on the current foot print, and to enforce The Draft's new setback requirements for new construction. 3

RESPONSES

2. See the response above. See also the response to Afton comment 1.

3. This is being considered in the development of state rules to implement this plan and is beyond the scope of the plan.

Page 4
November 29, 1999

Marine On St. Croix acknowledges it is a part of the region, that riverway issues transcend township, municipal, county and state boundaries and that as a result of cooperative efforts, substantial progress in the preservation and maintenance of the resources has occurred. Our community, which celebrated its Sesquicentennial in 1989 and whose citizens have always taken an active role, believe the modifications submitted herein are reasonable, will not be detrimental to the riverway and urge their adoption.

Glen Mills

Glen Mills
Mayor

COMMENTS

RESPONSES

L-4

CITY OF PRESCOTT

[illegible]

October 27, 1999

Randy Thoreson
Lower Riverway Planning Coordinator
117 Main St. S
Stillwater, MN 55082

Dear Mr. Thoreson:

I wish to go on record as being strongly in support of the recommendation on page 286 of the Draft Cooperative Management Plan Environmental Impact Statement which is to allow the minimum lot width in river towns to be determined by the underlying zoning. My reasons for support of this action are:

1. The river towns were platted long before the St. Croix became a scenic riverway and to mandate anything other than existing lot width is to force the cities to impose a double standard on the community. For example, the area along the river in Prescott was platted in the 1850's. The Mississippi River portion of the town, south of the Highway 10 Bridge has standard residential lot sizes of 75 feet but the area along the St Croix has a lot size requirement of 100 feet even though the lots platted are much smaller. As a result, Prescott has been through several legal battles due to the lot size imposed by NR 118. To be frank, it is my belief that NR 118 should stop at the corporate limits of any incorporated river town at a minimum. This leads me to reason 2.

2. River towns are as much a part of the history, culture, and heritage of the St. Croix as are trees, bald eagles and limestone bluffs. People have lived on the banks of the St. Croix for at least 3000 years. To artificially impose regulations, which have been stated as being designed to cause structures along the river to "deteriorate and go away" is to condemn the St Croix riverbanks to slum conditions as the structures do

COMMENTS

deteriorate and to rob the people of the rich heritage of the river towns river frontage.

1 Another concern I have is that in numerous meetings, I have heard the eastern boundary of the Scenic Riverway defined as Highway 10. This would be a fine perhaps if Highway 10 ran north and south but it does not. A better boundary, assuming that a boundary is needed within incorporated areas would be tied to the Bluff line, within a reasonable setback to avoid being impacted by land slippage, but near enough to the bluff line to allow uses on it's eastern side. Incidentally the Impact statement's map indicates that the eastern boundary is even farther from the river than Highway 10, which I hope is due to the scale of the map

Again, I strongly support allowing the local zoning in river towns to determine the lot dimensions and I feel that a better boundary for the river's eastern bank can arrived at.

Sincerely,

Lloyd R. Matthes

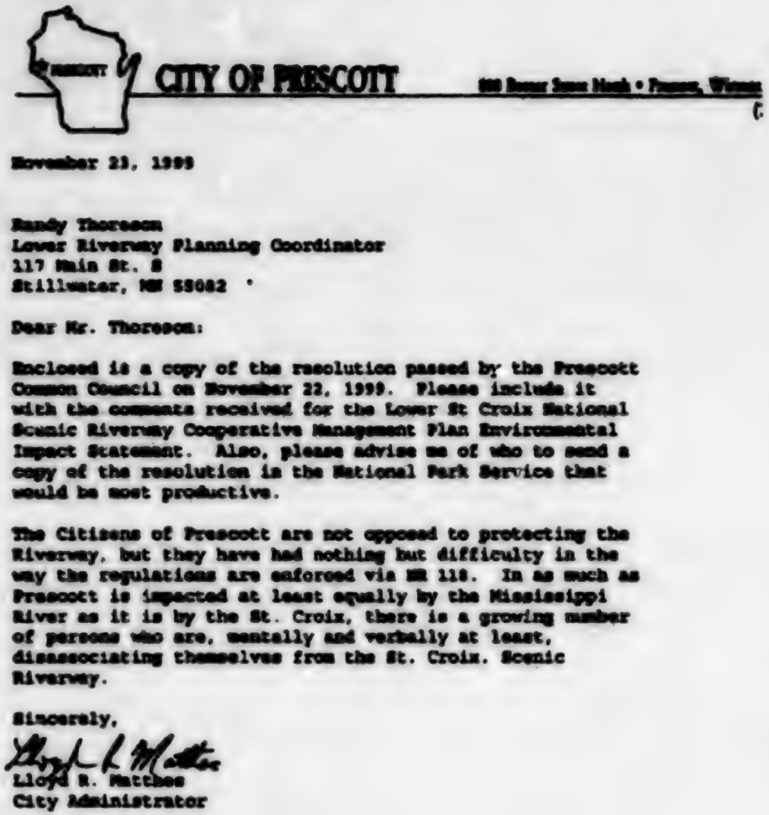
Lloyd R. Matthes
City Administrator

RESPONSES

1. It is difficult to determine the boundary from the map due to its scale. The best determinant of the boundary is its legal description, which is available from the managing agencies. The Lower St. Croix Management Commission acted in 1985 to move the boundary west (from a section line) to the railroad bridge; Front, Orange, and Broad Streets; and Highway 10. However, the boundary change was not published in the *Federal Register* so never took effect. That error will be corrected when other boundary corrections, discussed on page 75 of the draft plan, are published in the *Federal Register*. In the interim, Wisconsin DNR and the city are managing the area as if the boundary lay along the railroad bridge, Front, Orange, and Broad streets, and Highway 10.

COMMENTS	RESPONSES

L-44



CITY OF PRESCOTT [illegible]

November 23, 1999

Randy Thoreson
Lower Riverway Planning Coordinator
117 Main St. S
Stillwater, MN 55082

Dear Mr. Thoreson:

Enclosed is a copy of the resolution passed by the Prescott Common Council on November 22, 1999. Please include it with the comments received for the Lower St Croix National Scenic Riverway Cooperative Management Plan Environmental Impact Statement. Also, please advise me of who to send a copy of the resolution in the National Park Service that would be most productive.

The Citizens of Prescott are not opposed to protecting the Riverway, but they have had nothing but difficulty in the way the regulations are enforced via NR 118. In as much as Prescott is impacted at least equally by the Mississippi River as it is by the St. Croix, there is a growing number of persons who are, mentally and verbally at least, disassociating themselves from the St. Croix. Scenic Riverway.

Sincerely,

Lloyd R. Matthes
City Administrator

COMMENTS

RESOLUTION 24-99

A RESOLUTION TO REQUEST WITHDRAWAL FROM THE LOWER ST CROIX SCENIC RIVERWAY

WHEREAS, the City of Prescott was established in 1851 and platted along the St. Croix River shortly thereafter, and;

WHEREAS, the City of Prescott was an urban feature of the St. Croix River for 117 years prior to the Wild and Scenic Rivers act, and;

WHEREAS, the designation of Prescott as part of the Lower St. Croix National Scenic Riverway has been costly to both the City of Prescott and its residents;

1 BE IT RESOLVED that the City of Prescott hereby requests to be removed from the designation as part of the Lower St. Croix Wild and Scenic Riverway.

ADOPTED THIS 22ND DAY OF NOVEMBER 1999.

ATTEST:

Sheila R. Wojtewicz
Mayor

Lloyd R. Matthes
City Administrator

This is to certify that the foregoing is a true and correct copy of the resolution duly and legally adopted by the Common Council of the City of Prescott at a legal and regular meeting on the 22nd day of November, 1999.

Lloyd R. Matthes
City Administrator

RESPONSES

1. Congress established that the riverway shall extend from the dam at St. Croix Falls to the confluence with the Mississippi River.

COMMENTS	RESPONSES

L-110

Stillwater
THE BIRTHPLACE OF MINNESOTA

November 30, 1999

Randy Thoreson
Lower Riverway Coordinator
117 Main Street South
Stillwater MN 55082

Dear Mr. Thoreson:

The City of Stillwater has been an active participant in the development of the draft Management Plan over the past three years. Attached to this letter are additional comments on the draft plan.

Of particular concern to the City is the separation of Stillwater in two land use management districts, rivertown and small town. Stillwater is one town, a rivertown, and dividing Stillwater by some artificial line does not make sense and will make our job of managing river land uses more difficult.

Thank you for the opportunity to comment.

Sincerely,

Jay Kimble
Mayor
City of Stillwater

Attachment

CITY HALL: 216 NORTH FOURTH STILLWATER, MINNESOTA 55082 PHONE: 651-430-8800

COMMENTS	RESPONSES

City of Stillwater

Comments on Draft Cooperative Management Plan Environmental Impact Statement for the Lower St. Croix National Scenic Riverway

The following comments are offered as the City of Stillwater input on the draft Management Plan and Environmental Document. Representatives from the City did participate in draft plan development and are familiar with the document. The comments are organized in two sections, major points of concern and points of concern as listed below:

Major Points of Concern:

1. Generally, the documents seems to emphasis natural and scenic resources over cultural (historic) and recreational resources. This lack of cultural resources emphasis is reflected in the lack of mention in management actions section of any cultural resource protection measures. The section details natural resource actions, air and water quality actions, recreational and hunting, fishing and trapping management measures, commercial services 1 and concessions but no mention of cultural resource protection measures. The Appendix "F" Inventory of related historic site referred to on page 72 are listed historic sites and do not include sites eligible for historic listing. Preferably, additional study should be conducted to add to the national register site list the substantial number of eligible sites or reference to the list on page 72 changed.

2. The City of Stillwater recommends inclusion of land and water use alternative "A". Alternative "A" better accommodate existing or planned urban areas and does not regulate recreational uses unnecessarily.

2 Along with support of alternative "A", the City strongly contends all of Stillwater should be designated in one district, river town. The area of north Stillwater designated small town

1. The list in appendix F has been corrected.

2. Comment noted. The area between downtown and Dutchtown is quite natural in character and it would not be appropriate to convert it to look like downtown. The Dutchtown area is residential in character, with the exception of the two marinas, and bears a greater resemblance to Lake St. Croix Beach or Afton than to downtown Stillwater or Hudson.

COMMENTS

does not exhibit the characteristics of that district as defined in the plan on page 46. Three marinas, two public and one private, are located in the designated small town area.

The lots adjacent to the river are not large but small urban size lots. The "Dutchtown" area of Stillwater is not related to this riverfront area. It would be difficult to differentiate between the land south of Downtown in the rivertown district and with the lands north of Downtown in the small town district.

Both areas have marinas located next to them. The reason for change in designation is not described in the text and does not make sense from a City regulation point of view Stillwater is not two towns, we are one rivertown.

3. The City of Stillwater supports the preferred management structure being proposed. The partnership team and technical committee review and comment would help local government in their review of riverway projects.

Other Points:

3 1. On page 20, local government comprehensive plans along with regional plans (Metropolitan Council) should be mentioned.

2. Appendix A- Land use Regulations Guidelines. Some of the definitions and guidelines need further definition and consideration in terms of land use management area.

RESPONSES

3. The text has been changed to reflect the comment.

COMMENTS | **RESPONSES**

L-100

Village of Osceola

310 Chieftain Street
Osceola, WI 54020

P.O. Box 217
715-294-3498
FAX 715-294-2210

November 30, 1999

Mr. Randall Thomsen
Planning Coordinator
Lower St. Croix Scenic Riverway
117 Main Street
Stillwater, MN 55082

via FAX only

Dear Randy:

After last evenings meeting I would like to comment on the draft plan for the Lower St. Croix. In general I feel that the plan is well thought out and takes a good overall approach to river corridor. The product speaks well for the process. The one concern that I do have is with regard to the restrictions in the Small Town Historic districts. I feel to prohibit change of use now and into the future presumes that we know more of what is right at this point in time than those present in the future will know then. I feel we would be further ahead to spell out the objectives and leave the decisions of implementation to those decision makers present at the time decisions are required.

Thanks for spending time with us last evening.

Respectfully,

H.O. Owen

Harlin O. Owens
Administrator

335

L-78

November 29, 1999

To: Lower Riverway Planning Coordinator
117 Main St. S.
Stillwater, MN 55082

From: Pierce County Land Management Committee
Rita Kozak, Rich Ruemmele, Bill Schroeder, Jeff Holst, Martin Stotadal

Re: Draft–Cooperative Management Plan/Environmental Impact Statement

At the November 18, 1999 meeting of the Pierce County Land Management Committee, the Draft Plan was discussed. Below are the comment and concerns generated at that meeting.

1. Page 3 of the Plan states "The purpose of this plan is to describe the direction the managing agencies intend to follow…while meeting the riverway's stated purpose." The Committee supports the goal of the 1976 plan, that being preservation of the "…existing scenic and recreational resources of the Lower St. Croix through controlled development." It appears that the Lower St. Croix is seen from two different and isolated perspectives, one being focused on the river and its specific uses, the other focusing on the landholders. Each side seems to hold contrasting views on limits and amount of use, and there is not a shared perspective on the river as a whole or the river as part of the watershed.

The preferred alternative identified under the Land and Water Use Alternatives provides for both resource protection and land use. The other alternatives appear to depart from the original intent of the federal legislation.

2. A desire for increased land development on the river should not be the controlling factor in determining the future of the Lower St. Croix Riverway. As indicated in many places in the Draft Plan, the Lower St. Croix is a national riverway. The discussions seem to focus more on a comparison of which side of the river gets to develop the greatest amount of shoreland with the least amount of regulation. This short-sightedness would, in time, devalue the resource from both a land use and water-based perspective.

3. In the past, numerous discussions have centered on landowners who have purchased land after the 1976 legislation and are unhappy with existing legislation. There should not be unquestioning acceptance of existing regulations, but the regulations should not be viewed as obstructions put there merely to hinder landowner's enjoyment of their land. Landowners on the river are aware of existing regulations. Comparisons with other counties/states with less restrictions are not persuasive. The Lower St. Croix should not be managed by the lowest common denominator.

COMMENTS	RESPONSES
4. Any management plan must maintain a delicate balance between uses, with the quality of the river as the number one priority. The Committee has concerns that overuse by recreational users diminishes the quality for landowners, as does the reverse. 5. With respect to Management Structure Options, the identified preferred option seems reasonable. The Committee feels some unease with the suggestion that there should be election of voting members to the Commission. This might lead to the resource becoming a partisan issue, which is not in the best interest of management of the resource. 6. The Committee offers support for Appendix A—Land Use Regulation Guidelines. The rationale is clear and well considered, particularly the recognition that local zoning can adequately perform its functions within the riverway.	

COMMENTS

L-115

ST. CROIX COUNTY
WISCONSIN
ZONING OFFICE
ST. CROIX COUNTY GOVERNMENT CENTER
1101 Carmichael Road
Hudson, WI 54016-7710
(715) [illegible]

November 30, 1999

Randy Thoreson
Lower St. Croix National Scenic Riverway
117 Main Street South
Stillwater, MN 55082

Re: Draft Lower St. Croix Cooperative Management Plan

Dear Mr. Thoreson:

The St. Croix County Planning, Zoning and Parks Committee and the Land and Water Conservation Committee have been kept informed regarding the progress of the Lower St. Croix Management Plan and the issues that remain outstanding. We offer the following comments on the issues to be resolved by your Commission that are relevant to our areas of jurisdiction.

Percent Slope

There are a number of factors that influence soil erosion. The factors we have some control over, or can limit the impacts of, are the length of slope, slope percent (angle) and soil coverage (vegetation).

The St. Croix River bluff and upper stream terraces are areas of sensitive slopes, soils and vegetation. Allowing increased activities and land disturbances to occur on higher percent slopes within the bluff area greatly increases the potential for excessive soil erosion, irreversible impacts to the land, and detrimental effects to the water quality of the St. Croix River. Likewise, the greater the percent of slope, the greater the difficulty and costs entailed to physically work and stabilize eroded areas.

1 For the reasons outlined, we believe that the current standard regulating activities on slopes of 12 % or more should be kept in the regulations.

RESPONSES

1. Concur. The intent to continue to regulate activities on slopes of 12% or greater is identified on page 283 of the draft plan. Using a steeper gradient was considered during the planning process but rejected. The Natural Resource Conservation Service advised keeping the standard at 12%, stating there was more evidence today than 25 years ago that erosion problems can occur too quickly on slopes greater than 12%.

COMMENTS	RESPONSES
Minimum lot size The plan policy "minimum lot size will be determined by the community's underlying zoning ordinance" supports our communities goals. We support a minimum lot size of 2.5 acres with 1 acre contiguous net buildable area. We feel it is important to maintain a minimum buildable area to avoid parcels that are too small for sustaining construction of building or sanitation facilities. **Setbacks** We support the current setback standard of 200' from the OHWL as a means to regulate visibility and provide greater setback to help protect the shoreline and water quality. **Slope Preservation Zone**	
2 This term and its areas of applicability must be clarified. Does this "zone" apply to slopes not facing the river, to 2nd or 3rd tier bluffs? Regulations pertaining to slopes not facing the river have been inconsistently administered in the past. This must be made clear in the plan **Substandard Structures**	2. As defined on page 283 of the draft plan, the "slope preservation zone" is any slope greater than 12% anywhere within the riverway boundary. Slopes not facing the river may be handled differently as noted in the Wisconsin DNR memo dated December 29, 1999, addressed to Rep. Kitty Rhoades, but this is a level of detail beyond the scope of this plan that will be addressed as the states develop land use regulations.
3 We believe that non-conforming principal structures and garages should be allowed to remain and be improved but should not be expanded. **Structure Height**	3. The two states have different statutes that may prevent a consistent approach to substandard structures and nonconforming uses. Further, the Wisconsin legislature was considering changing the Wisconsin statute as this plan was being finalized. This issue will be addressed in state land use rulemaking processes subsequent to completion of this plan; all references to this topic have been removed from the plan.
4 The county recently changed the regulation from 25' to 35' and support leaving it at 35' in the rural residential segments. **Riverway Districts**	4. Comment noted. It was felt that the vertical profile of structures in rural areas should be reduced to limit their visual impact.
5 We recommend that portions of land located near t[illegible]x Islands Wildlife Area (Town of Somerset Sections 17, 20 & 29) be considered f[illegible]lusion within the Riverway District. There are a number of private properties in this region located on sensitive bluffline areas, that are not regulated within the Lower St. Croix National Scenic Riverway. **High water/no wake**	5. Concur. This boundary amendment is discussed on page 75 of the draft plan.
6 We believe the trigger for the high water/no wake should be 681'. Our experience with other county lakes and rivers has shown that significant shoreline erosion can occur before the water level reaches the high water mark. The 681' level should give the shoreline vegetation a better opportunity to establish itself and therefore protect the banks from erosion.	6. See the response to Minnesota-Wisconsin Boundary Area Commission comment 6.

COMMENTS	RESPONSES
Shore area no-wake zone 7 We recommend a zone of 300 feet. A larger near-shore buffer would help prevent boating conflicts between motorized and non-motorized traffic. A healthy near-shore environment depends upon successful aquatic and terrestrial plant communities. Boat traffic, too close to shore, can easily destroy these plants with propellers and wakes. When the plants go, so too go the animals that depend on them for food and shelter. A 300' no-wake zone would protect the near shore vegetation and ensure viable populations of fish, birds, and insects. Moreover, the zone would aid in the battle against shoreline erosion by allowing aquatic and terrestrial plants to more easily establish themselves along the shoreline. Vegetation is the only line of defense against shoreline erosion. Aquatic plants dissipate the wave energy while terrestrial plants hold the soil in place. Therefore, more costly solutions to shoreline erosion such as rip-rap can be avoided.	7. The shore area no-wake zone would remain at 100 feet.

Management Structure

We support the preferred option outlined in the plan, largely keeping the existing structure intact. We believe that the current structure works well and should be retained. The first line of authority is the local government, which is both representative and accountable. Elected officials or appointees and government employees have done a good job in the past and have been objective. Our concern with the other management options is that anyone who has an economic interest in the River may not be objective and may be influenced by personal interest or special interest.

The Saint Croix River is a beautiful asset that belongs to all of the people, and therefore it should be protected in the interest of all of the people.

Please contact us if you have any questions on our comments. We look forward to working with the commission as modifications proceed.

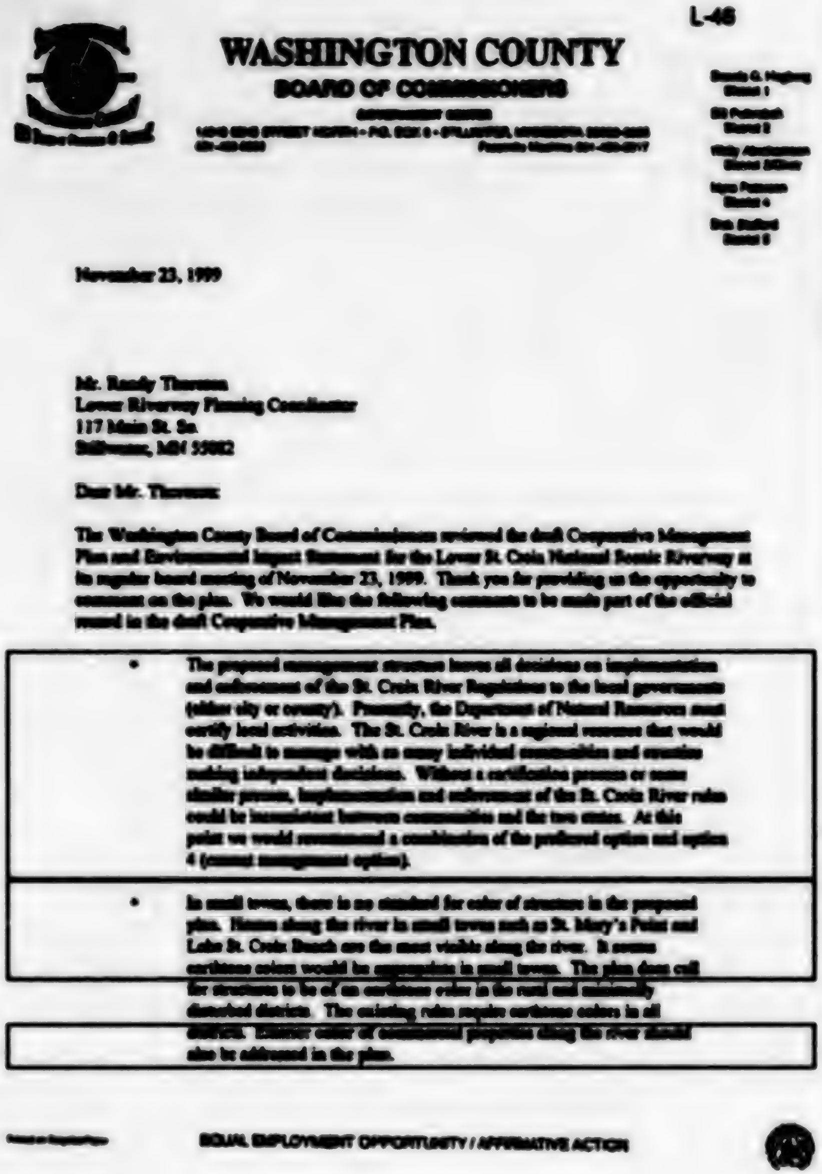
Respectfully,

Ron Raymond/dg
Ron Raymond
Chair
Planning, Zoning and Parks Committee

Art Jensen/dg
Art Jensen
Chair
Land and Water Conservation Committee

c. Zoning Director
Planning Director

COMMENTS



L-46

WASHINGTON COUNTY
BOARD OF COMMISSIONERS
[illegible]

November 23, 1999

Mr. Randy Thoreson
Lower Riverway Planning Coordinator
117 Main St. So.
Stillwater, MN 55082

Dear Mr. Thoreson:

The Washington County Board of Commissioners reviewed the draft Cooperative Management Plan and Environmental Impact Statement for the Lower St. Croix National Scenic Riverway at its regular board meeting of November 23, 1999. Thank you for providing us the opportunity to comment on the plan. We would like the following comments to be made part of the official record in the draft Cooperative Management Plan.

1
- The proposed management structure leaves all decisions on implementation and enforcement of the St. Croix River Regulations to the local governments (either city or county). Presently, the Department of Natural Resources must certify local activities. The St. Croix River is a regional resource that would be difficult to manage with so many individual communities and counties making independent decisions. Without a certification process or some similar process, implementation and enforcement of the St. Croix River rules could be inconsistent between communities and the two states. At this point we would recommend a combination of the preferred option and option 4 (current management option).

2
- In small towns, there is no standard for color of structures in the proposed plan. Homes along the river in small towns such as St. Mary's Point and Lake St. Croix Beach are the most visible along the river. It seems earthtone colors would be appropriate in small towns. The plan does call for structures to be of an earthtone color in the rural and minimally disturbed districts. The existing rules require earthtone colors in all districts.

3
Exterior color of commercial properties along the river should also be addressed in the plan.

Printed on Recycled Paper

EQUAL EMPLOYMENT OPPORTUNITY / AFFIRMATIVE ACTION

RESPONSES

1. See the response to Minnesota-Wisconsin Boundary Area Commission comment 5.

2. The text has been changed to restrict structure color in the "small town" and "small town" historic districts.

3. The structure color requirements apply to all structures, regardless of their use.

	COMMENTS	RESPONSES
	Mr. Randy Thompson November 23, 1999 Page 2	
4	• There are no restrictions on vegetative cutting in areas where there is no bluffline. In other words, if the property is level or below the bluff there are no restrictions proposed for tree cutting. Structures in these areas are close to the river and very visible in some cases. Allowing tree removal would make them more visible, thus conflicting with the purpose and intent of the riverway plan. Current regulations do contain standards in regard to tree cutting both between the river and along the bluffline.	4. Existing state land use rules limit vegetative cutting within 200 feet of the ordinary high-water mark. The plan has been revised to include this restriction (see page 284 of the draft plan).
5	• A small area in the northern part of the County appears to be in the "natural minimally preserved" district. Setbacks and lot width would be greater in this area than under present standards. It should be determined what impact the proposed changes would have on properties in this area.	5. New development on land within the "conservation" district in the northern part of Washington County (among other areas) would be restricted to larger and wider lots, with greater structure setbacks and lower structure height. The "minimally disturbed" district and the "natural" district that appeared in the draft plan turned out to be virtually identical and they were merged in the preferred alternative into the similar "conservation" district.
	• Proposed language allows substandard structures to be expanded if visually inconspicuous. This is a very difficult standard to judge. Additional standards such as prohibiting the height of the structure from being increased, minimum setbacks from bluff and river, and the extent of expansion would go further towards the goal of maintaining the scenic qualities of the river as well as providing a consistent standard for implementation.	
6	• The plan does not address open space design/cluster subdivision. With proper performance standards, we find open space design subdivisions should be encouraged in the river district.	6. Cluster development will be provided for in the regulations being developed to implement this plan.
7	• The cultural resources section of the plan should provide additional recommendations towards the development of strategies for historic preservation. The development of historic contexts could be developed along with the survey and evaluation of structures, sites and historic landscapes. The Secretary of the Interior's standards for survey and evaluation should be the criteria by which future historic preservation planning activities should occur.	7. See the response to Minnesota State Historical Society comment 2.
	• In regard to surface water management, we are supportive of the preferred alternative. It should be noted Washington County provides the bulk of enforcement services. Without increased involvement in enforcement from other counties along the river, it will be very difficult to enforce the additional restrictions proposed in the plan.	

Mr. Randy Thoreson
November 23, 1999
Page 3

8 • There are instances of erosion problems within the St. Croix Watershed which affect the water quality of the St. Croix River. A funding mechanism to correct these problems should be explored.

9 • As part of the preferred management structure option, there is reference to a newly created partnership team. We feel the membership of this partnership team should be made up of local elected officials or individuals appointed by elected officials.

10 • We feel there should be some flexibility to vary the St. Croix River rules where the variance would further the public good such as the elimination of an erosion problem if the variance were granted.

Again, thank you for providing us the opportunity to comment on the plan. We look forward to your responses to the issues outlined in this letter.

If you have any questions, please feel free to contact me at 651-430-6213.

Sincerely,

Wally Abrahamson

Wally Abrahamson, Chair
Washington County Board of Commissioners

WA/afw

cc: Washington County Commissioners
Jim Schug, County Administrator
Don Wisniewski, Director of Transportation and Physical Development
Larry Nybeck, Acting Deputy Director of Transportation and Physical Development
Dennis O'Donnell, Senior Land Use Specialist

8. The *St. Croix River Basin Water Resources Management Plan*, described on pages 19-20 of the draft plan, will identify funding sources for erosion control planning and implementation.

9. As noted on page 118 of the draft plan, the partnership team would include local government appointees selected by elected bodies, but would also include some stakeholder group representation, as did the planning task force.

10. The provisions under which variances can be granted are provided for in state law and cannot be changed by this plan.

COMMENTS | **RESPONSES**

L-34

ANDERSEN CORPORATION

November 23, 1999

Mr. Thoreson
Lower Riverway Planning Coordinator
117 Main Street South
Stillwater, MN 55082

Dear Randy:

Andersen Corporation is located in the City of Bayport, on the shore of the St. Croix River where our founder Hans Andersen built our first window manufacturing building in Minnesota in 1913. Over the course of the past 86 years Andersen Corporation has expanded our window manufacturing to become the world's largest wood window manufacturer. Our core business remains in Bayport on the shore of the St. Croix River.

Because water bodies provide sources of water needed for drinking, transportation, industry and commerce, it was common historically, that settlements and resulting communities grew up around and along bodies of water. In the 1800's, the areas around Stillwater, Bayport, and Hudson along the St. Croix River developed around bustling logging and lumbering operations with a number of large sawmills. Since our founding in 1903, the magnificent St. Croix River Valley has remained the home of the Andersen family and Andersen Corporation manufacturing plants.

We have conducted a cursory review of the "Draft Cooperative Management Plan, Environmental Impact Statement for the Lower St. Croix National Scenic Riverway."

Most notably from our review we find that Bayport is designated as a "Small Town" Management Area and that such designation permits only land uses associated with single family structures and existing commercial and multi-family uses.

It is our understanding that if the land use restrictions prohibiting Industrial Zoning with the City of Bayport is enacted as policy, it will not permit Andersen Corporation to significantly improve our structures, expand our operations, or replace our facilities if they become significantly damaged or destroyed by fire, flood or a similar disaster.

Andersen Corporation employs about 6,000 people. Nearly 4,000 work in Bayport where our primary manufacturing facilities have been located since 1913. We continue to grow

100 Fourth Avenue North   Bayport, Minnesota 55003-1096   651-439-5150

COMMENTS

Page two
Randy Thoreson
November 23, 1999

and in 1999 spent millions of dollars on building improvements and equipment at the Bayport facilities. Because of our continued growth, we hired approximately 300 new employees in 1999.

1 Andersen Corporation requests the "Draft Cooperative Management Plan Environmental Impact Statement for the Lower St.Croix National Scenic Riverway" be amended to permit industrial uses as specified in the City of Bayport's current local ordinances so the Andersen Corporation can continue its operations in Bayport on the St. Croix River.

Sincerely,

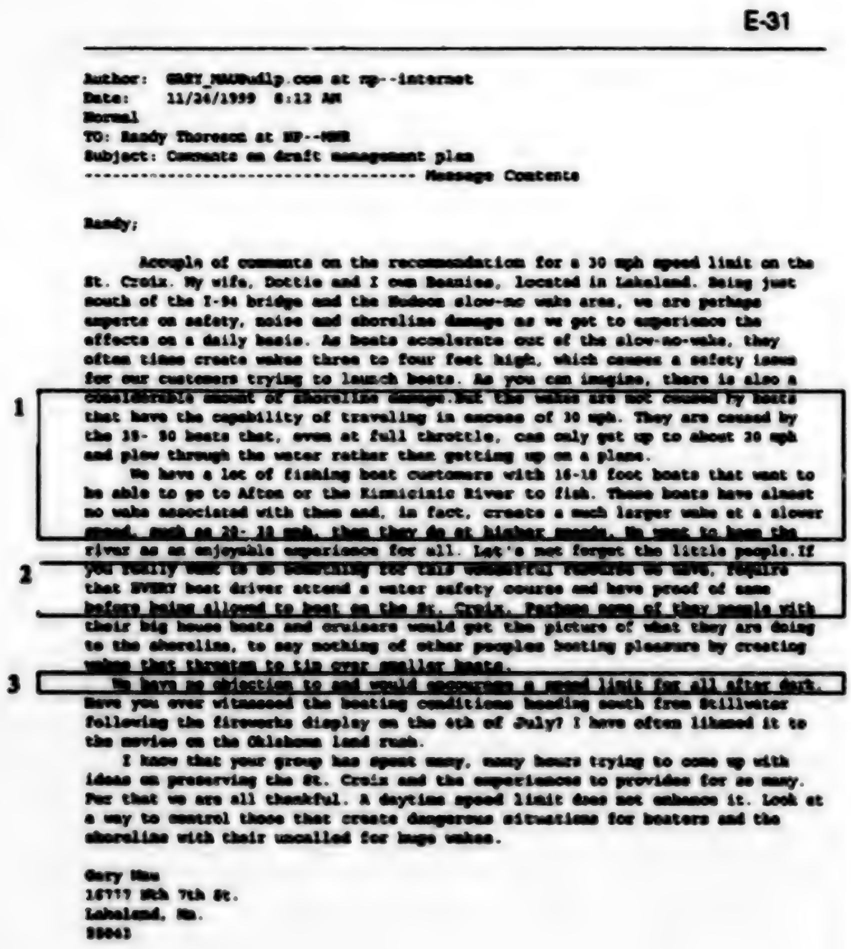
John D. Piepel
Vice President
Operations Engineering
Andersen Corporation

JP/sw
cc: Ken Hartung – City of Bayport
Representative Mark W. Holsten
Marc Hugunin, Metropolitan Council
Senator Gary W. Laidig
Congressman Bill Luther

RESPONSES

1. See the response to Afton comment 1.

COMMENTS



E-31

Author: GARY_MAU@udlp.com at np--internet
Date: 11/24/1999 8:12 AM
Normal
TO: Randy Thoreson at NP--MWR
Subject: Comments on draft management plan
------------------------------------ Message Contents

Randy;

Acouple of comments on the recommendation for a 30 mph speed limit on the St. Croix. My wife, Dottie and I own Beanies, located in Lakeland. Being just south of the I-94 bridge and the Hudson slow-no wake area, we are perhaps experts on safety, noise and shoreline damage as we get to experience the effects on a daily basis. As boats accelerate out of the slow-no-wake, they often times create wakes three to four feet high, which causes a safety issue for our customers trying to launch boats. As you can imagine, there is also a

1 considerable amount of shoreline damage.But the wakes are not caused by boats that have the capability of traveling in excess of 30 mph. They are caused by the 18- 30 boats that, even at full throttle, can only get up to about 30 mph and plow through the water rather than getting up on a plane.

We have a lot of fishing boat customers with 16-18 foot boats that want to be able to go to Afton or the Kinnickinnic River to fish. These boats have almost no wake associated with them and, in fact, create a much larger wake at a slower speed, such as 20- 30 mph, than they do at higher speeds. We want to keep the river as an enjoyable experience for all. Let's not forget the little people.If

2 you really want to do something for this wonderful resource we have, require that EVERY boat driver attend a water safety course and have proof of same before being allowed to boat on the St. Croix. Perhaps some of they people with their big house boats and cruisers would get the picture of what they are doing to the shoreline, to say nothing of other peoples boating pleasure by creating wakes that threaten to tip over smaller boats.

3 We have no objection to and would encourage a speed limit for all after dark. Have you ever witnessed the boating conditions heading south from Stillwater following the fireworks display on the 4th of July? I have often likened it to the movies on the Oklahoma land rush.

I know that your group has spent many, many hours trying to come up with ideas on preserving the St. Croix and the experiences to provides for so many. For that we are all thankful. A daytime speed limit does not enhance it. Look at a way to control those that create dangerous situations for boaters and the shoreline with their uncalled for huge wakes.

Gary Mau
16777 [illegible] 7th St.
Lakeland, Mn.
55043

RESPONSES

1. See the response to Minnesota-Wisconsin Boundary Area Commission comment 2.
2. Comment noted. Both states will continue to apply statewide boater safety training standards in the riverway.
3. See the response to Minnesota-Wisconsin Boundary Area Commission comment 2.

E-67

Author: "jim" <jim@[illegible]croix.com> at np--internet
Date: 11/30/1999 3:28 PM
Normal
TO: Randy Thoresen at NP--MWR
Subject: EIS Comments
----------------------------------- Message Contents

Randy Thoresen

National Park Service

Stillwater, MN 55082

November 30, 1999

Dear Randy:

I am sending you the following comments on the Draft EIS for the Lower St. Croix Cooperative Management Plan as the Director of the Carpenter St. Croix Valley Nature Center. For the past 18 years I have been the manager of a non-profit environmental education facility with land on both sides of the St. Croix. I feel most qualified to comment on this EIS. Whatever the final choice is, it will have a direct bearing on the use and enjoyment of the Carpenter Nature Center by thousands of people per year. These visitors to CNC come to enjoy and learn from the wilderness that is the Carpenter Nature Center. With over one mile of shoreline on the St. Croix, I think you can see that both land management decisions and water surface use decisions are of great importance to the Nature Center.

On behalf of the Board, staff and volunteers of the Carpenter Nature Center, I would urge the managing agencies to move from what they call their "preferred alternative" and instead pick Alternative D.

This EIS is designed to identify the best management plan for a Nationally designated Wild and Scenic Riverway. This means, in essence, the entire length of Riverway is in fact a park. The management of such a resource should be for its protection from development and from any further degradation by humans. The only printed alternative in the draft EIS that accomplishes that is Alternative D. I shall quote right from the document itself on page 108 it states:

"In alternative D the lower Riverway would be managed to promote and restore the natural qualities of the Riverway. The predominance of natural features over modern developments would increase within the Riverway boundary."

Is this not the essence of why the river was designated in the very first place? I see no other alternative that can accomplish what Alternative D would accomplish and thus submit that this alternative should be the preferred alternative of the managing agencies.

I also believe something must be done to address the constant damage done to our shoreline and that of the entire lower Riverway by large displacement boats. 1 Speed limits are only one issue. The speed of most very large boats could never really get to 30mph but even at 20 mph, their wakes are tremendous. There must be some sort of attention to the methods needed to control the wakes of large displacement boats. I do not see this issue addressed anywhere in the Draft EIS.

1. See the response to Minnesota-Wisconsin Boundary Area Commission comment 2.

347

COMMENTS	RESPONSES
2 I would further state that the river elevation trigger for the slow no-wake designation be immediately dropped to 680 feet without any delay.	2. See the response to Minnesota-Wisconsin Boundary Area Commission comment 6.

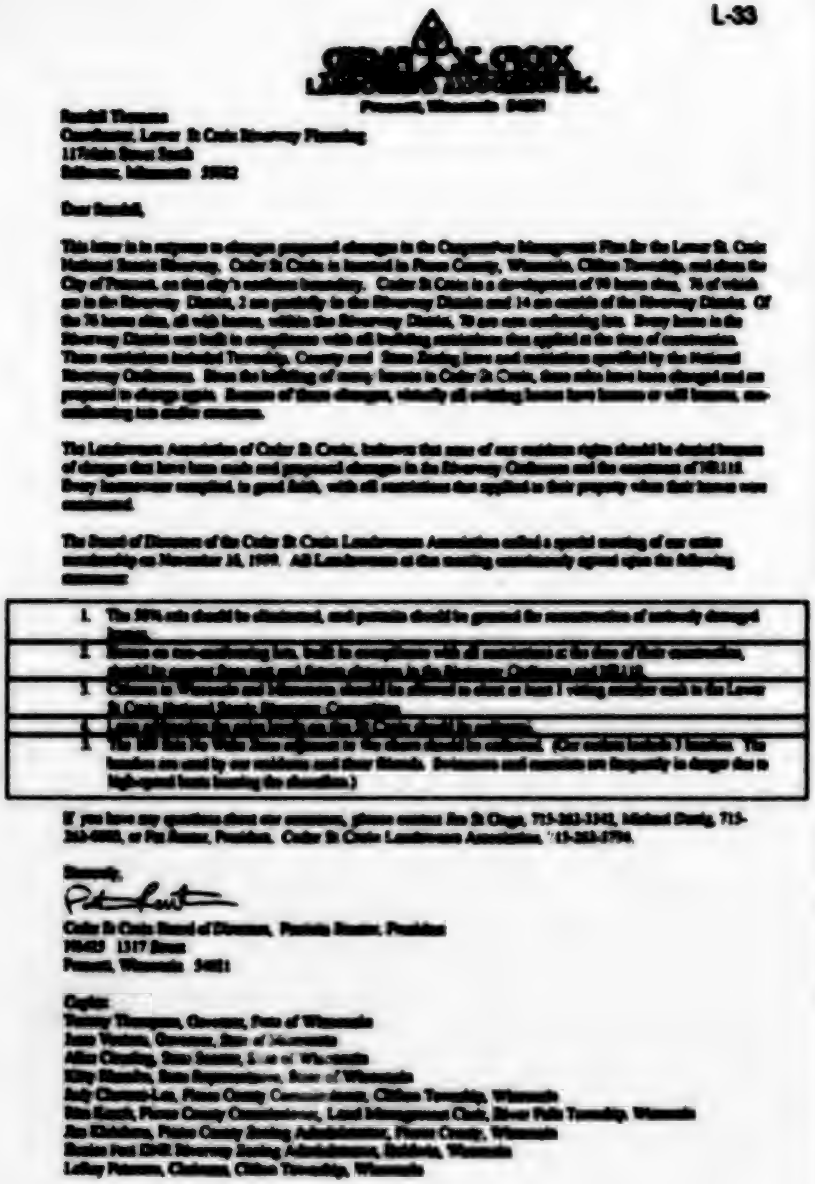
Respectfully submitted.

Jim Fitzpatrick

Land-owner in Denmark Township and Cuyuna/Crosville
Corporate Natural Center - Exec. Director

COMMENTS

L-33



1

2

3

4

5

RESPONSES

1. See the response to St. Croix County comment 3.

2. See the response to St. Croix County comment 3.

3. Congress specifically directed that the riverway be jointly managed by the National Park Service and the two states, and the Lower St. Croix Management Commission was created to be the vehicle for coordinating that joint management. The agencies originally asked to Minnesota-Wisconsin Boundary Area Commission to sit as a nonvoting member to enhance public input; this plan adds the input of a representative of the Lower St. Croix Partnership Team, as described on page 118 of the draft plan.

4. Enforcement of boat noise laws was increased in 1999.

5. The plan recommends the managing agencies seek funds for additional enforcement staff.

COMMENTS

L-111

370 Selby Avenue, Suite 300
St. Paul, MN 55102
651.312.1000 • 651.312.0012 *fax*

Web: www.1000fom.org

November 30, 1999

Randy Thoreson
Lower Riverway Planning Coordinator
117 Main Street S.
Stillwater, MN 55082

Re: Draft Cooperative Management Plan EIS

Dear Mr. Thoreson:

Thank you for the opportunity to comment on the draft EIS. Congratulations to you and your management team for the excellent work you have put in.

As you are aware, 1000 Friends of Minnesota has been leading the Green Corridor Project, a public/private partnership in Chisago and Washington Counties to protect corridors of priority open spaces through incentive based tools. The comments we present below are those exclusively of 1000 Friends of Minnesota, not the Green Corridor Project collaborative. However, they are made from that context within which we have been working.

Generally speaking, we support your Preferred Land and Water Use Alternative. However, there are several elements of Alternative D that we would like to see reflected in the final Preferred Alternative. Our specific recommendations are presented shortly below. Our comments are restricted to the Minnesota side of the river where we have our knowledge and expertise.

1 In regard to the Management Structure Options, we defer to the judgment of your management team. However, we do note that we see no compelling reason presented for the elements of options 2 and 3 which supplant local regulatory authority. In that area, we note our concurrence with your recommendations in the Preferred Option. In all other areas related to Management Structure Options, we do not feel sufficiently knowledgeable to comment.

Our specific recommendations concerning the Land and Water Use Alternatives are as follows:

2 We appreciate your shift to seven land-use management areas. This is much more consistent with the diversity of communities in the riverway and provides for a more flexible approach to implementation.

RESPONSES

1. Concur. While the boards described in Options 2 and 3 provide for coordinated management, they add considerable cost to plan implementation and in some cases create a new layer of government.

2. Concur. While the plan no longer contains the seven land use districts described in the draft, the five districts it contains provide significantly greater land use management flexibility than the two districts created by the original plan.

COMMENTS

In regard to land-use management area classification, we prefer the approach taken in Alternative D to emphasize a more natural approach. In particular, we propose adjusting the Preferred Alternative to include the following parts of Alternative D:

3
- ➤ William O'Brien State Park as Natural
- ➤ High Bridge to north limits of Stillwater as Natural
- ➤ North end of Afton State Park to south end of St. Croix Bluffs Regional Park as Natural

These three areas on the Minnesota side, in addition to the area from the South end of Interstate Park to the south end of McLeod's Slough, provide some of the greatest natural areas within the riverway. They are highly significant areas and deserve increased protection over what is recommended in the Preferred Alternative.

We appreciate your interest in encouraging local governments to protect historic values in river town and small town historic management areas. We encourage you to seek creative incentives for these communities, including grant opportunities.

We appreciate Alternative D's provision for greater restoration of natural landscapes.

- 4 However, we are concerned that vegetative management focuses first and foremost on screening over the restoration and maintenance of significant plant communities. In parts of the riverway with high ecological quality and/or high restoration potential, we feel that restoration and maintenance of significant plant communities should take precedence over vegetative screening.
- 5 In addition, table A-1 on p. 288 notes that the proposal would provide no restrictions on cutting within a designated proximity to the river. We feel vegetative cutting restrictions are appropriate and necessary within 200 feet of the river.
- Within a similar context, we applaud your provision that would revise state regulations that restrict vegetation management on private lands to allow maintenance and restoration of the natural diversity and ecological integrity of significant plant communities.
- 6 As regards water use, we prefer the provisions of Alternative D above Stillwater. These provisions will help maintain the rare opportunity that the St. Croix provides for safe, quiet, and peaceful water based recreation so close to a major metropolitan area. Greater diversity and more active uses can be provided from Stillwater south.
- We agree with your recommendation to ask Congress to deauthorize the 3-foot navigation channel between the NSP dam and the Arcola Sandbar.
- 7 Regarding the use of discontinued industrial sites, the appropriate use will often be site specific. We encourage modification of the Preferred Alternative to include redeveloping the areas as parkland.
- 8 Regarding river crossings, we like the provision of Alternative B that no change in the scale or character of the bridges would be permitted.
- 9 We generally agree with your long-term goal to reduce the number and size of visible river crossings. However, in the case of road bridges that are replaced, we strongly encourage you to permit the long-term maintenance and operation of the old bridges as pedestrian bridges (in areas where that use would be appropriate including Stillwater).

RESPONSES

3. The text has been changed to define all of the state parks as "conservation," along with St. Croix Bluffs Regional Park. The area between Marine and Stillwater, and the area between Afton State Park and St. Croix Bluffs Regional Park, will remain classified as "rural residential."

4. Comment noted. There are areas that would leave some structures starkly visible if a remnant bluff prairie was restored; the concept in the plan is that vegetation would continue to screen structures on the top of the bluff, while bluff prairie restoration could occur further down the bluff.

5. See the response to Washington County comment 4.

6. Comment noted.

7. Comment noted.

8. Comment noted.

9. Comment noted.

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COMMENTS

10
- We also like D's provision that the managing agencies would encourage a reduction in utility lines.
- The general approach of Alternative D to limit camping opportunities would be a beneficial addition to the Preferred Alternative. We do not have sufficient experience to suggest which areas are most in need of restrictions and suggest that perhaps a middle ground could be found in this topic between the Preferred Alternative and Alternative D.
- We applaud your efforts to relax some state land use regulations in river town, small town historic, and small town management areas. These developed areas should have greater local government flexibility.
- We concur with your suggestion that new development outside of developed areas should be visually inconspicuous as seen from the river.
- In regard to table A-1, we note the following:
  - We applaud your suggestion for relaxing structure color standards in developed areas.
  - We further applaud your suggestion to defer to local zoning in regard to minimum lot width, structure heights, and permitted uses in river town areas and minimum lot sizes in developed areas.

11
  - In regard to minimum lot width for small town and small town historic areas, we are concerned about the weakening of the MN rules that also include some 150 foot provisions. We appreciate the goal of uniformity but do not feel it should be pursued at the expense of environmental protection.
  - We applaud your suggestion for greater standards on minimum lot width in natural and minimally disturbed areas as well as structure height in rural, park, natural, and minimally disturbed areas.

12
  - We are concerned about the strict limitation on commercial and multi-family uses in the small town and small town historic areas. Rather than restricting them to existing facilities, we suggest they be made a conditional use.

13
- On a minor note, their appears to be an inconsistency between the last sentence of the first paragraph in the second column of page iv and the first sentence of the third paragraph of the first column of page v. These two statements about how restricted development is under alternative B and C seem at odds with each other.
- We are excited about your Watershed Stewardship Initiative. Please keep us in mind for participation in that group.

Once again, thank you for the opportunity to provide our comments. We are encouraged by your good work and look forward to working with you in the future.

Sincerely,

Michael Pressman
Director of Planning

RESPONSES

10. The preferred alternative encourages a reduction in utility crossings. It would also reduce camping on islands.

11. Minnesota's current rules require a 100-foot lot width in areas served by municipal sewer and 150 feet in areas not served by municipal sewer. With statewide requirements in place in Minnesota that lots must have adequate land area for two drainfields, the water quality goals of that lot width or size are met.

12. See the response to Afton comment 1.

13. The inconsistent statements have been corrected.

L-50

[illegible] ARCHIVES
P.O. Box [illegible]
[illegible], MN [illegible]

November 24, 1989

Lower Riverway Planning Coordinator
117 Main Street
Stillwater, MN 55082

My comments on the Draft Management Plan Environmental Impact Statement, Lower St. Croix National Scenic Riverway:

As a consultant doing historical surveys for the City of Stillwater, I am concerned about your comments on Cultural Resources.

You mention at several points (page 73-74) that cultural resource surveys are "in progress." I do not see how identification—and hence preservation—of the cultural resources can take place until they have been identified through the surveys. Up to now, these surveys have been sporadic

1 and fragmented. I would suggest a concerted and co-ordinated effort to initiate and complete all the surveys so the business of identification and preservation of historic resources can proceed.

2 You mention (page 16) a lack of cultural resource management, but nowhere that I could find do you address exactly what you intend to do to remedy this lack—other than to do some more surveys. You do not say what actions might be taken in the case of a Stillwater lift bridge, or similar situation. I think the plan needs more details so that when a budget is formulated based on this plan, there are some entries for resources management as well as identification.

3 There are historic houses and other significant cultural resources outside the river town and small town historic districts and the local governments, whatever they might be, should be encouraged to develop ordinances to protect these structures/resources. In other words, this policy of protection and designation should be required along the length of the river, not just in certain parts.

In general, I think the cultural resources part of the plan is, overall, weak and vague.

1. See the response to Minnesota State Historical Society comment 2.
2. See the response to Minnesota State Historical Society comment 2. As noted on page 18, this plan does not address the ongoing Stillwater bridge debate.
3. See the response to Minnesota State Historical Society comment 8.

COMMENTS	RESPONSES
4 As a recreational user of the river, I would like to add that I no longer dare take my small aluminum fishing boat with its 10 hp. motor onto the St. Croix, south of the Arcola sandbar any summer afternoon. I am afraid of being swamped by the big wakes from the many large boats (and some small ones) that are totally oblivious to the potential damage their wakes can cause. I would like to see the Stillwater lift bridge left in the down position thereby limiting the size of the boat that has access north of Stillwater. In the event that unlikely event does not occur, I would urge the adoption of a speed limit or a no wake zone be extended (and enforced) south to the Stillwater bridge.	4. Comment noted.

Sincerely yours,

Donald Empson

Donald Empson

L-42

MINNESOTA RIVER VALLEY AUDUBON CHAPTER
Box 20400, Bloomington, Minnesota 55420

November 23, 1999

Mr. Randy Thoreson
Lower Riverway Planning Coordinator
117 Main St. S.
Stillwater, MN 55082

Dear Mr. Thoreson:

The purpose of this letter is to comment on the Lower St. Croix National Scenic Riverway Cooperative Management Plan EIS. The Natural Resources Committee of the Minnesota River Valley Audubon Chapter is concerned about possible degradation of the St. Croix River from overuse and overdevelopment. We support maximum protection of the river to keep it in the most pristine condition so that future generations can enjoy the peace and solitude of the river as we have, and therefore we support Option D. We also support Option 4 as a management option so that the decisions which affect the St. Croix are based on science and health of the river and its wildlife, keeping control with the National Park service and MN and WI DNR departments.

Residents of Minnesota and Wisconsin are extremely fortunate to have a National Wild and Scenic River in its backyard. A truly wild and scenic river should have an abundance of wildlife which is not disturbed by the wake and noise from speedboats, water-skiers and PWCs. Developments must be kept back from the river for maximum aesthetic appeal. Shorelines should appear natural, snags and all, with ample vegetation to prevent erosion. And exotic species, such as zebra mussels, which pose a real threat to the river must be confronted quickly by the regulatory agencies.

Thank you for your vision in trying to prevent further damage to the beautiful St. Croix. As we've seen all too often, people can love a natural area to death. Thank you for your consideration.

Sincerely,
Kathleen Egan-Benck
Kathleen Egan-Benck
MRVAC Natural Resources Committee Chair
16440 Creekside Circle, Minnetonka, MN 55345

copy: Mr. Al Garber, MN DNR Commissioner
The Honorable Jesse Ventura, Governor of Minnesota

Printed on Recycled Paper

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COMMENTS

RESPONSES

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NSP

Northern States Power Company

[illegible]
P.O. Box 8
Eau Claire, WI [illegible]
Telephone [illegible]

November 30, 1999

Randy Thoreson
Lower Riverway Planning Coordinator
117 Main Street South
Stillwater, MN 55082

RE: DRAFT COOPERATIVE MANAGEMENT PLAN ENVIRONMENTAL IMPACT STATEMENT—LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

Northern States Power Company Comments

Dear Mr. Thoreson:

Thank you for the opportunity to comment on the draft Cooperative Management Plan for the Lower St. Croix Riverway. Northern States Power (NSP) appreciates the efforts the planning group has made in the development of this document.

Overall, the plan provides an excellent framework to make decisions regarding the management of the Riverway in order to protect the River for the values in which it was created. NSP's comments focus on the discussion of river crossings, with its primary focus on crossings related to the energy industry.

The general goals presented in the plan discourage new crossings, encourage the use of existing crossings and support the consolidation of crossings. These are goals that have been expressed by the managing agencies since the Riverway was created.

NSP has concerns regarding some of the wording describing the acceptable alternatives for rebuilding or constructing new crossings and the basic definition of an "existing crossing."

The main discussion of river crossings occurs on page 67 in the outline of the Preferred Alternative proposal. In the section discussing utility lines, the plan states "Utility lines could be replaced and new lines could be added to existing crossings. In addition new lines could be placed under existing bridges. However, no new utility lines would be permitted to cross the river, and existing line towers could not be made larger. Consolidation of utility line crossings would also be encouraged."

COMMENTS

Northern States Power Company Comments
Lower St. Croix Riverway Draft Cooperative Management Plan and EIS
Page 2

Northern States Power Company

While the statement above allows that new lines could be added and consolidation of utility line crossings would be encouraged, it also puts limits on that potential. If certain towers cannot be made "larger" (which could mean wider), a company's ability to consolidate crossings may be difficult (for example, placing two transmission lines on one crossing).

The discussion of upgrading existing crossings or building new crossings has been a difficult one to address. However, an earlier paragraph on page 67 provides the measure by which NSP would expect a proposed crossing of the Riverway be addressed: "The long-term goal for this alternative would be to reduce the number and size of visible river crossings. The managing agencies would encourage safe, compatible, multiple uses of existing corridors and structures that cross the riverway. All proposed changes to river crossings or corridors would require site-specific environmental evaluations and approval from applicable local and state agencies. The impacts of each proposal would be analyzed and documented before the managing agencies permit any change in a river crossing or corridor."

NSP agrees that each river crossing proposal must be looked at on a case-by-case basis. However, the review has to take into consideration the potential impacts on other important issues such as cost, reliability and environmental impact. An analysis of the pros and cons of underground versus overhead construction must also be made based on the proposal before the agencies at the time. Factors such as location in the riverway and size of facility would need to weigh into the analysis. The implications of any decision on the proposal outside the Riverway must also be considered.

NSP is also concerned about the definition of an existing corridor for a potential project. It is NSP's position that existing crossings that could be considered for an energy project would include existing gas lines, railroads and bridges. This is especially important since the primary goals of the managing agencies limit the number of potential crossings and make it unlikely that any entirely new crossings would be approved in the Riverway. As noted above, the decision as to whether the facility would cross overhead, on the structure, or underground would be a decision that would need to be made by the permitting agencies at the time of the project. In addition, if the policy is to use existing corridors, in some cases that corridor may need to be widened to accommodate the additional facility. It would be reasonable to work to minimize that additional width to reduce impact on the resources.

In summary, NSP's comments are as follows:

1
- NSP supports the policy of encouraging use of existing crossings of the Riverway for additional energy facilities. However, NSP requests that the plan minimize restrictions that would impact the final design of such crossings until the specific details are reviewed at the time the project is proposed. NSP understands that the goals of the Riverway to minimize crossings would be a major issue in such an analysis.

2
- NSP requests that the plan consider revising the various sections of the plan discussing river crossings. The revisions would include removal of certain subjective language ("existing line towers could not be made larger") and instead use a general approach in the wording that places emphasis on the managing agencies reviewing all the issues regarding a proposed crossing before a final decision is made on a proposal.

RESPONSES

1. Comment noted.

2. Comment noted.

COMMENTS	RESPONSES

NSP is committed to working on addressing riverway concerns in the future with the various agencies involved with managing the Lower Riverway. NSP believes that through cooperative discussions, it can continue to provide reliable and affordable energy services to its customers while working to address issues that may impact the Riverway and the values for which it was created.

NSP appreciates the opportunity to comment and would be available to meet to discuss this issue in more detail if you so desire. Please contact me at 715-839-4661 or Jim Alders at 612-330-6732 if you have any questions.

Sincerely,

Pamela Jo Rasmussen
Senior Environmental Analyst

cc: Jim Alders
Don Jones
Jim Musso
Kathy Zeeladorff, PSCW

Port of Sunnyside Club, Inc.
On the Beautiful St. Croix River
[illegible] St. Croix Trail North
Stillwater, Minnesota 55082 • [illegible] • Fax [illegible]

Mr. Randy Thoreson
National Park Service
117South Main St.
Stillwater, MN 55082

Dear Mr. Thoreson,

Our purpose in writing is to present information which is relevant to the direct impact statement for the lower St. Croix river that is presently in the planning stages. We're writing, on behalf of the Board of Directors and the members of The Port of Sunnyside Club, Inc.

In recent years the size and speeds of boats have risen dramatically and the trend appears to be continuing. River congestion between Sunnyside and the City of Stillwater has also increased due in part to the many attractions that the city offers on the riverfront throughout the summer. The increased number and size of boat driven wakes and the resultant damage to our docks and potential safety problems to our members and guests cause us to appeal to you for assistance.

We have a number of issues to share with you regarding the conditions that exist on the river today caused by boat driven wakes.

SAFETY:

Fueling boats when large wakes are present is dangerous. Spillage is likely when large waves are present and containment is extremely difficult.

Boarding and disembarking boats when the expected large wakes are present is dangerous and personal injury is probable.

Securing boats to their moorings is very difficult when large wakes are present and constitutes a hazard to our people and property. In fact, one of our members lost three fingers attempting to tie his boat up during high wake conditions.

Simply walking on our docks is hazardous when large wakes attack our docks. We can cite several incidents where members and guests have literally fallen off the piers into the river as a result of a wake causing the docks to lurch up and down in rapid fashion.

Boat traffic in front of Sunnyside also causes problems. It is hard to determine a boats' speed at night as you cross the river, either entering or exiting our marina. With boats attaining speeds of up to 70-80 mph at night and the small size of the lights on the boats it is virtually impossible to estimate their position relative to your own. This condition has continued to escalate in recent years.

COMMENTS

PROPERTY DAMAGE

Our docks take a tremendous pounding each weekend from boat driven wakes; a condition that will continue to escalate as boats get bigger and faster. Storms do not damage our property at nearly the same rate.

THE NEW RIVER CROSSING

The proposed Stillwater bridge will create a zone where north and south bound river traffic will be accelerating and decelerating as they enter and exit the bridge area. It is common knowledge that wakes caused by this condition are 2-3 times greater than normal.

NEW DOCK CONSTRUCTION

Sunnyside Marina is in the process of rebuilding its docks. We have had to experiment with new, more expensive construction designs because other dock manufacturers will not guarantee their styles against our type of conditions.

We need only look at the precedents already set on the St. Croix and Mississippi Rivers. Shore to shore no wake zones are now enforced in and around:

Hudson Marina
Afton and Windmill Marinas
Prescott Marina at the confluence of the two rivers
The three marinas near Red Wing, MN
The two marinas at Wabasha, MN

In the current drawings for the new Stillwater river crossing The Minnesota DNR and MnDOT show a new boat launch ramp to be established approximately 300 yards south of Sunnyside Marina. Launching and landing boats on a typical weekend day with 3-4 foot wakes present would be extremely difficult and very dangerous.

1 In lieu of the above issues and conditions we are requesting a no wake zone be established at a point north of our northern property line to a point south of the proposed new launch ramp. Minnesota Rules of the Department of Natural Resources, Chapter 6110.3700, Water Surface Management Standards, Subp 7 provides the basis for our request.

At the annual meeting of Sunnyside Marina on September 28, 1999 attended by 104 of our 205 members and other guests we broached the subject of pursuing a no wake zone. A show of hands indicated overwhelming support to proceed.

We are extremely anxious to proceed with this matter. If clarification or any additional information is required please don't hesitate to contact us.

Sincerely,

Frank W. Matschina

Frank W Matschina
President, Board of Directors
The Port Of Sunnyside Club, Inc.

cc: Board of Directors

RESPONSES

1. **The plan does not propose creating the no-wake zone recommended in this comment.**

L-08

RIVERWAY
CONSENSUS STANDARD
500 Judd Street PO Box 37
Marine on St Croix MN 55047-0037 USA
www.rcs.org

30 November 1999

Randy Thoreson
Lower Riverway Planning Coordinator
117 Main Street South
Stillwater, Minnesota 55082

Dear Randy

The attached represents the thirty-eight Comments of Jim Johnson of the Riverway Consensus Standard Foundation (RCS) for the Draft Cooperative Management Plan Environmental Statement (draft EIS) in attachment as suggested by 40CFR1503.4. Please consider this covering letter as part of RCS's Comments.

The number of Comments, while prodigious, represents a number fewer than the actual number of meetings of the Lower St. Croix Planning Task Force attended. Comments supplement, improve, and/or modify the draft EIS's analyses and its failure to adhere to The National Park Service Organic Act of 1916, 16 USC 1, the National Environmental Policy Act Chapter 55 Subchapter 1 § 4331 (Congressional declaration of purpose) and § 4332 (C) (iii). Further, the Comments emphasize that the draft EIS does not fully express the extent to which the riverway is also a human community and as such, deserves respect. The Riverway Community has a right and obligation to preserve its authentic and land ethic elements. This may include further regulations being imposed upon the rights of landowners and boaters.

These remarks do not represent Comments of the City of Marine on St. Croix, Minnesota (City). As you know, I represented the City on the Lower St. Croix Planning Task Force with attendance at over 90% of the 53 meetings held. RCS supports the general tenor of Comments of the City relative to the draft EIS's Appendix A.

As Mayor representing the City (then called the Village of Marine on St. Croix) I presented a September 21, 1974 statement in general support for the original Lower St. Croix Environmental Impact Statement (FES 75-69) upon which The Final Master Plan, dated February 1976, was based. The City's position also included a follow-up expanded Comment dated October 16, 1974. (An aside: Today, I can think of only one other individual who was involved in the process for both the instant draft EIS and the original FES 75-69 and 1976 Master Plan.)

A quarter of century later, it is timely to review the October 16, 1974 Comment with its titles reading: "Ski-touring and Cycling," "Historical Designation of Marine Historical District," "Zoning as means of Preservation," and "Compatibility of Historical Zoning with Scenic River Zoning." (The full Comment and its attachment may be found on pages A-28 to A-30 of the Lower St. Croix Final Environmental Statement/Master Plan FES 75-69.)

COMMENTS	RESPONSES

RCSI's Cover Letter to the Comments on the Draft Cooperative Management Plan Environmental Statement
Page 2 of 3
30 November 1999

Ski-touring and Cycling – "We feel the recreational implications (of Ski-touring and Cycling), including the appropriate land-use philosophies affecting these uses should be added to the final version of the Master Plan (and the EIS)." These were not included. (At that time, in 1974, virtually all of the land in Wisconsin, south of the Swing Bridge was to be controlled through zoning versus fee acquisitions.)

Historical Designation of Marine Historical District – In part: "The Master Plan and the EIS should reflect this." It was never mentioned.

Zoning as means of Preservation – In part: "No preservation can be guaranteed or even probably assured by sole reliance of zoning." And later: "The almighty dollar is long in this valley; and while it has been the position of our Council to retain local control in matters of this import, it takes a higher form of government to set the standards and indeed promulgate a policy of fee and scenic easement acquisitions."

1 Today, one can point to Public Law 93-621 of the 93 Congress, S. 3022, Sec. 2, Subsection (a) found on Page 296 of the draft EIS where the original Lower St. Croix Act of 1972 "is amended by deleting '$7,275,000' and inserting in lieu thereof '$19,000,000'." (As Mayor of Marine, along with the Governor and Minnesota and Wisconsin Congressional delegations, including Senators Mondale and Humphrey, we met with the Department of the Interior in order to add $11,725,000 to insure that: "No preservation can be guaranteed or even probably assured by sole reliance of zoning.") Sadly, as the 1999 Draft EIS Page 181 points out – the States of Minnesota and Wisconsin virtually ignored their legislation and have purchased little or nothing in fee on the riverway.

Compatibility of Historical Zoning with Scenic River Zoning – "(A)llow considerations of the historical integrity of certain structures within the Marine Historic District if an alteration of a building is proposed." The City was again ignored. It has taken a quarter-of-a-century to rectify this oversight.

Marine's October 16, 1974 Comment reads: "Hopefully, the people will continue to enjoy the St. Croix River and its environs while maintaining the dedication to preserve this valley for future generations. Somewhere in this world of short-term decision making, pressuring 'brushfire' and people problems has to (come) the vision of a tomorrow, recognition of what our true legacy should be. The St. Croix River is our legacy; it is worth saving."

The 1999 draft EIS touches on but does not fully express, the extent to which the Riverway is a Community unto itself. It is also a human community. It deserves respect and as such, the Community has a right and obligation to preserve its aesthetic and local civic elements by further regulations on the rights of landowners and boaters. This 1999 draft EIS vision of a tomorrow is not our best vision. By dropping of old Alternative E from ever being debated and then retaining Alternative A as a viable alternative for consensus debate, the draft EIS's vision of tomorrow, the Preferred Alternative denies future generations the legacy the XXth Century stewards should have delivered.

1. The referenced $19 million was intended to provide acquisition funds to the National Park Service, not the states. The states did complete fee acquisition of lands within Afton and Kinnickinnic state parks; the 1976 plan did not propose any other state fee acquisition activity, other than a few small boater waysides that proved impractical.

COMMENTS	RESPONSES

[illegible] Cover Letter to the Comments on the Draft Cooperative Management Plan Environmental Statement
Page 3 of 3
[illegible] November 1999

Of course, it is still not too late. The record of decisions could reflect real protection of the St. Croix.

And finally, a personal thanks to you, Randy for an unmatched job. You are a credit to your profession.

Sincerely yours,

[illegible]

[illegible] - Residence
[illegible] - Fax

PS: I would also ask that the copy of the web page [illegible] for this date be included along with the Comments.

Attachments: 1. Comments On The Matter Of The Adoption Of The Proposed Draft Cooperative Management Plan Environmental Statement For The Lower St. Croix National Scenic Riverway.
2. Web page from Riverway Commons Standard [illegible].

COMMENTS ON THE MATTER OF THE ADOPTION OF THE PROPOSED DRAFT COOPERATIVE MANAGEMENT PLAN ENVIRONMENTAL STATEMENT FOR THE LOWER ST. CROIX NATIONAL SCENIC RIVERWAY

Summary: The Riverway Commons Standard Foundation (RCS) has supported the concept of the process employed for developing the Cooperative Management Plan's Environmental Statement for the Lower St. Croix National Scenic Riverway (EIS). Website www.rcs.org maintained regular postings during the entire planning process. RCS also posted objections, viz., the Lower St. Croix Planning Task Force (Task Force) Staff's actions which led to; a) the inclusion of Alternative A and, b) the rejection of Task Force-selected old Alternative E in the process. That said, RCS supports many of the general concepts presented in the EIS. These Comments call for specific management agencies' actions and a record of decision in order to correct certain errors. The following thirty-eight Comments are made in accordance with the Code of Federal Regulations 40CFR1503.4.[1]

1. Page 3 – The Preferred Alternative cannot be reconciled with the charge to preserve the St. Croix. Here is why. The draft EIS references the original goal of the *Master Plan* of 1976 and the Act creating the Lower St. Croix Riverway. Both the Master Plan and the Act key on the word – "preserve." The *American College Dictionary* defines "preserve 1. To keep alive or in existence; make lasting. 2. To keep from harm or injury; save." Acknowledging the meaning of preserve is critical to a complete understanding of the role of the EIS and of the subsequent Cooperative Management Plan (CMP) to the future health of the riverway.

The EIS introduces the concept of continuity. Page 3 states: "(T)he plan provides a management framework that will help maintain a balance between continuity and adaptability ...." (Emphasis added.) RCS acknowledges and supports that a management framework is required in order to insure continuity, to insure preservation. However these RCS Comments will show how the Preferred Alternative, as now drafted, with its corresponding management framework does not insure either the continuity or the preservation of the riverway.

Indeed, the EIS's Preferred Alternative never really had a chance to fill this role. The Section "PURPOSE OF AND NEED FOR THE COOPERATIVE PLAN" states the plan was developed "in cooperation" with the Task Force and, the purpose of the plan is to describe the "direction the managing agencies intend to follow." Here is the rub. The Staff of the Lower St. Croix Task Force allowed the Task Force to accept the possibility of an Alternative A as the riverway's *possible* 20-year "management framework," an alternative whose MANAGEMENT CONCEPT reads in part: – "(A)s long as users were not causing *significant* damage ... or posing safety hazards to others, no efforts would be made to regulate activities." (Emphasis added.) On top of this action, old Alternative E was rejected.[2] Alternative E's MANAGEMENT CONCEPT read in part: "Like Alternative D the lower riverway would be managed in Alternative E to protect and restore the natural qualities of the riverway and to promote slower uses of the river. (In this alternative ...) *Increased emphasis would be placed on protecting natural resources and restoring natural landscapes compared to other alternatives.*" (Emphasis added.)

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[1] TITLE 40--PROTECTION OF ENVIRONMENT, CHAPTER V--COUNCIL ON ENVIRONMENTAL QUALITY, PART 1503--COMMENTING-- Sec. 1503.4 (a) Response to comments.
(2) Develop and evaluate alternatives not previously given serious consideration by the agency.
(3) Supplement, improve, or modify its analyses.
(4) Make factual corrections.
(5) (Cite) the sources, authorities, or reasons... indicate those circumstances that would trigger agency reappraisal or further response.

[2] The record shows that the elimination of Alternative E was Task Force Staff-driven. To whit, a Staff memo distributed to the Task Force encouraging its removal reads: "It seems clear that selection and implementation of Alternative E would produce a future riverway that would be *inconsistent* with (the Task force's agreed upon) underlying principles." (Emphasis added.)

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RCS Foundation Response to the Draft Cooperative Management Plan Environmental Statement
11/30/1999

An immediate response to these allegations might be: Doesn't EIS's Alternative D provide similar protections to those found in old Alternative E?[3] No. In neither the land use nor in the recreational aspects of Alternative D does one find old Alternative E's parameters including possible alternatives for important actions insuring the riverway's continuity and preservation. Alternative D does not contain a regional, interstate transportation scheme. Alternative D contains nothing about noise control.[4] Possible increases in government funding for land and scenic easement acquisitions are not found in Alternative D.[5]

However, Alternative D (and old Alternative E) has land resource protection cited as "minimally disturbed," "park," or "natural" land use segments in 62% of the total riverway. But, through the Task Force consent-consensus process, the 62% protection was reduced to the degree that only 42% of the riverway is now considered (in the EIS's Preferred Alternative) to be "minimally disturbed," "park," or "natural." This is a reduction by a significant 1/3rd.[6]

Page 3 sets the ground rules when it states, "The cooperative management plan will serve as the general management plan for the Lower St. Croix River."[7] And so as will explained in numerous Comments, throughout this response, especially Comment 16, Alternative A embodies a management framework with a tyrannical force of the accumulation of small, i.e. "not ... significant" decisions.[8] (In Comment 16, Alternative A is named the "Nicks and Cuts" Alternative.)

It is recommended the following question be answered before the record of decision and the Final EIS and CMP is published: Can the agencies, who are operating under The National Park Service Organic Act of 1916, 16 USC 1, the National Environmental Policy Act Chapter 55 Subchapter 1 § 4332 (Congressional declaration of purpose) and § 4332 (C) (iii), support an Alternative to have been preferred in the process (Alternative A) whose MANAGEMENT CONCEPT reads in part – "(A)s long as users were not causing *significant damage* ... or posing safety hazards to others, *no efforts* would be made to regulate activities."? (Emphasis added.)

The National Park Service Organic Act of 1916, 16 USC 1, established the National Park Service and says the NPS is to "promote and regulate use of the parks..." and it further defines the *purpose* of national parks "...to conserve the scenery and the natural and historic objects and wildlife therein and to

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[3] The operative words describing old Alternative E are found on Page 114: "The other alternative (Old E) that was dropped from consideration emphasized resource protection and slower, nonstructured resource protection.(Alternative E in the April 1997 workbook.) Increased emphasis would be placed on restoring natural landscapes compared to other alternatives."

[4] Especially noise from traffic through riverside communities containing high-speed highways such as with Minnesota State Highway 95 speeding through Bayport and Marine on St. Croix (Minn.)

[5] To be sure, the land use designations of old E are the same as D, but, as an example and to repeat, the draft EIS emphasizes on Page 114 that in old Alternative E: "Increased emphasis would be placed on restoring natural landscapes compared to over alternatives." An important tool for restoration is increased government funding for land and scenic easement acquisitions.

[6] Old Alternative E was not included in the Task Force caucus and consensus process with the result of a "vision of tomorrow" (the draft's Preferred Alternative) that denies future generations the legacy the XXth Century river stewards should deliver, the legacy the riverway community deserves.

[7] The general management plan for the Lower St. Croix River should serve/ have been based , in part, on consideration of Alternative A. Alternative A is not even a "no-harm" alternative, – no-harm being an extremely low moral hurdle for both the agencies and the community.

[8] For example, Alternative A relaxes existing standards on decks and additions. It also accepts increased development along the riverway as being inevitable.

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provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

The National Environmental Policy Act (NEPA) is also cited. (NEPA is the 1969 law employed in the preparation of the Environmental Impact Statement required for the CMP.) NEPA's SUBCHAPTER I - POLICIES AND GOALS, calls out for the agencies "to promote efforts which will prevent or eliminate damage to the environment."[9] Would Alternative A, if it had been selected as the Preferred Alternative, ever possibly qualify under NEPA? If not, why was it considered?

Chapter 55 Subchapter I § 4332[10] (C) (iii) says the draft EIS should have provided, in depth, – the detail of *all* alternatives. These Comments outline how that language means including old Alternative E. And the draft EIS's comment on Page 114 regarding old Alternative E is not "a detailed statement."

Why was old Alternative E dropped? The draft EIS's Page 114 tells us about old Alternative E: "The task force dropped this alternative because it would be inconsistent with the principles underlying the alternatives." (Emphasis added.)[11] To be sure, relegating the entire Riverway to a management framework employing the principles underlying old Alternative E might have been viewed *by some* as "inconsistent with the principles underlying the alternatives." But old Alternative E never called for the entire river to be treated in this matter. It should never been removed.

2 It is recommended that the record of decision and the Final EIS contain adjustments of the Final EIS and CMP's Preferred Alternative as if: *First*, Alternative A and its caucus was removed from consideration except it should be listed as one of the EIS's ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY; and, *Second*, that the Final EIS and CMP's Preferred

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[9] **§ 4331. Congressional declaration of purpose**

The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; *to promote efforts which will prevent or eliminate damage to the environment* and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality. (Emphasis added.)

[10] **§ 4332. Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts**

The Congress authorizes and directs that, to the fullest extent possible: … (2) all agencies of the Federal Government shall - …

- (C) include in every recommendation or report on proposals … a detailed statement by the responsible official on -
    - (i) the environmental impact of the proposed action,
    - (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
    - (iii) *alternatives to the proposed action*, (Emphasis added)
    - (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity.

[11] Identical language is found in the Staff memo mentioned above.

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2. Alternative A remains an implementable alternative and therefore was considered in development of the draft plan. The old alternative E (which was not the no-action alternative described in the draft plan) would have significantly reduced recreational diversity in violation of the first purpose statement on page 10 of the draft plan, and was therefore eliminated following extended public discussion.

Alternative contain NEPA 1 § 4332 (C) (iii) alternatives[12] from old Alternative E as if it *had been* considered in the Task Force caucus-consensus process.[13] And *Third*, the old Alternative E's Management Concept should be used to frame the new Final CMP's Preferred Alternative and thereby enable future riverway continuity and preservation.

So to close the first Comment, while the draft EIS Page 3 states that the plan "was developed in cooperation" with the Task Force, Staff actions manipulated the ultimate selection of alternatives chosen. This selection ultimately led to the caucus-consensus process which resulted in the drafting of major parts of the draft EIS's Preferred Alternative.[14] This "preferred Alternative, if implemented, would result in a subsequent major diminishment of riverway continuity and preservation. The Cooperative Management Plan's Environmental Statement for the Lower St. Croix National Scenic Riverway does not protect the riverway.

3 2. On Page 6 it is written: "While many today refer to the Lower St. Croix as 'metro river,' ...." As one who has been involved with the Lower St. Croix Riverway since its inception, I do not recall ever having read or heard anyone, let alone "many," use the term metro river to describe the Lower St. Croix.[15] It is recommended that the word "many," if not the entire sentence, be deleted from the Final Draft.

3. Page 13 -- Under PLANNING ISSUES AND CONCERNS the term "framework" is used. If Alternative A is not eliminated and old Alternative E reinstated, land issues decisions will be made which could not be "fully resolved in the future." It will be either too late and/or "too expensive."

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[12] These alternatives as listed on Page 114 include -- but are not limited to "Increased efforts ... on restoring natural landscapes compared to other alternatives," "more restrictions ... placed on new developments," "natural quiet ... encouraged" and "banning all motorized" watercraft in certain locations. Other alternatives never considered, include -- but are not limited to valley-wide transportation schemes, noise-reduction, land and scenic easement acquisition.

[13] During the alternative-selection process, as a Member of the Task Force, I originally offered a compromise for the Task Force to drop *both* Alternatives A and E. Included in that offer was to allow the Task Force and subsequent co[illegible] to have a *full* debate towards a consensus on water regulations. In order to consider all alternatives, the *full range* of Water Management Areas (WMA), including the WMA of non-motorized should be included. I cited NEPA § 4332 (C) (iii) in my request. If the task Force dropped both A and E, I suggested the Task Force place the non-motorized WMA into Alternative D, or Alternatives B and C for caucus and consensus-building. I made a mistake. It was wrong to suggest the Task Force drop both Alternatives. This was a proposal that wrongly juxtaposed the two alternatives. The agencies should never have allowed, let alone encouraged, the consideration of Alternative A; and then, should never have allowed, let alone encouraged the rejection of an Alternative E.

[14] The WMA for non-motorized in the main channel was also eliminated. The Task Force should have fully considered the possibility of instituting this WMA alternative into the main channel above the Arcola Sandbar. It should be acknowledged that WMA for non-motorized in the main channel above the Arcola Sandbar provides the single best WMA alternative for improved control of the Zebra Mussel. See draft EIS Pages 15-16, 20, 33-34, 72, 112, 166, 204, 219, 233, 257 and 286. Staff actions precluded debate on an alternative that could be a tool against the introduction of the zebra mussel, a significant threat mentioned on no less than thirteen pages in the draft EIS.

[15] Are the agencies referring to literature and/or Letters to the Editor, etc. published by the Riverway's enemies? The riverway enemies are legion, and include the Highway Departments, developers, land speculators, etc.

3. The fact the riverway is within a large and rapidly growing metropolitan area is indisputable.

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4. Page 16 – The catch-and-release of smallmouth bass deserves Comment. Page 16 of the Draft EIS reads: "A lack of knowledge limits understanding of potential impacts to the fishery."[16] Presentations were made to the Lower St. Croix Planning Task Force on the smallmouth bass fishery. (Cf. Dr. Lindall.) The Smallmouth Bass Alliance is referenced on Page 200 as one organization who has been involved in the "Coordination and Consultation" of the draft EIS. Plainly, in the ensuing years since FES 73-69, the combination of sonar devices and killer crank baits has enabled some anglers to catch and kill tremendous numbers of smallmouth bass.

4 Fishing for smallmouth[17] should be considered under the management framework. RCS recommends that the Final EIS include Catch-and-Release of certain species.[18] RCS recommends the agencies redo Pages 19, 23, 34 introducing the factor of the passion of smallmouth bass fishers.[19] [20]

5. Page 17 – The last sentence of the Navigational Channel Maintenance section reads, "On the other hand, if the 3-foot channel was maintained, it would provide easier motorboat access." While a person reading the draft EIS section Navigational Channel Maintenance presented later in the document would recognize that such maintenance would be abhorrent and is never recommended by the draft EIS, there appears no disclaimer to that effect on Page 17. If the 3-foot channel was indeed maintained, you

5 would not have the Lower St. Croix Riverway, as now recognized, at all. It is recommended that either disclaiming language appear on Page 17 or that the entire sentence be removed.

6. Page 23 – New State regulations would be required for smallmouth bass Catch-and-Release. (See Comment 4 above.)

6 7. Page 30 – The RIVERWAY STEWARDSHIP section needs the three important techniques of stewardship, viz., the practice of science, standards, and conformity assessment.[21] At the core of riverway stewardship should be the encouragement of riverway science as practiced and encouraged by St. Croix Watershed Research Station located in Marine on St. Croix.[22] It is recommended that the Final EIS also

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[16] While the authors of the original Master Plan and FES 73-69 were given the location of smallmouth bass "hot spots" and the 1970's health of the fishery, unfortunately nothing about smallmouth bass was included in FES 73-69 or the Master Plan.

[17] Smallmouth bass fishery-advocates' passion about their pastime can match the St. Croix Waterway people's passion about their high-speed boating. Any day. And while we have not set up a web site, nor do we storm the barricades demanding our rights, the health of the smallmouth fishery is important to us and to future generations of fishers.

[18] Along with smallmouth, muskies and Northern Pike would also be candidates.

[19] Significant energy is put into draft EIS descriptions trying to placate the powerboat enthusiast. Virtually nothing has been offered as alternatives for fishers.

[20] The NPS's experience with fishing at Yellowstone NP should stand as an outstanding example of what Catch-and-Release could do for riverway smallmouth and anglers.

[21] Riverway Consensus Standard (RCS) is a private foundation whose purpose is to educate citizens with various aspects of watershed public policy. Our overall mission is to improve river environs, specifically the St Croix River, through use of science and the consensus standards process in combination with techniques of conformity assessment.

[22] This important arm of the Science Museum of Minnesota has not been given adequate exposure in the draft EIS. This should be corrected in the Final version. (Page 29 provides the opportunity.) Riverway Staff from the National Park Service are very familiar with the Station and its outstanding scientists and personnel.

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4. This issue is beyond the level of detail of this management plan but may be considered in development of the fisheries management plan identified on page 19 of the draft plan.

5. The referenced sentence is within a section of the plan intended to describe issues and concerns relevant to the cooperative management plan. The text accurately describes issues related to navigation channel maintenance.

6. The plan clearly states the managing agencies' commitment to science (see page 31 of the draft plan, for example). Performance evaluation will be accomplished through standard monitoring and evaluation processes of each plan implementation component, rather than as a separate component.

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encourage the development of consensus standards[illegible] in response to riverway resource protection challenges and riverway actions.[illegible] Stewardship also includes Conformity Assessment.[illegible] In order that riverway requirements are being met, it is recommended that the Final EIS and CMP also employ Performance Measurement.[illegible]

It is recommended that the RIVERWAY STEWARDSHIP section state its goal. In a word, stewardship is what stewardship does, i.e. it provides a measurable result such as a sustainable riverway, a healthy land, healthy water. It is also recommended the RIVERWAY STEWARDSHIP section contain the CMP's definitions. Let the riverway stewards of today and tomorrow know what is expected of them, and what you, the agencies, expect to deliver to these partnerships. And lastly, it is important in this section of RIVERWAY STEWARDSHIP to clearly state the limitations of government vis a vis sustainability.[illegible]

8. Page 31 – The section NATURAL RESOURCES MANAGEMENT says on Page 31, the managing agencies "would strive to minimize," and, they "would continue to protect." (There is a world of difference between these two commitments.) And on Page 33 – the future of mussel fauna "would depend a great deal … on other agency support." Other examples can be cited.

7 Agencies, the law has directed you to preserve the St. Croix. It is recommended that the riverway agencies accept the language of conformity assessment and performance management. It is recommended that phrases such as "would strive to minimize" have no place in this plan and should be removed.

Show the courage to commit to actions – to measurement, – to data, – to calling out specifics. Allow yourselves to be evaluated on just whether you are, in fact, preserving the riverway.

8 9. Page 34 – In the Final EIS the section RECREATIONAL MANAGEMENT should call for the elimination of hunting deer with high-powered rifles within the riverway boundaries. This practice has been allowed all these years.[illegible] Use of shotguns would be understandable and perhaps even desirable, but

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[illegible] Consensus standards are developed through the cooperation of all parties who have an interest in participating in the development and/or use of the standards. For the record, RCS uses a "working" definition of consensus that says the majority of those involved enthusiastically support the standard with the minority agreeing to acquiesce to the opinion of the majority. Consensus is built; it is not declared. By definition, consensus often requires discussion in a "cascading choices process" until a substantial majority agrees.

[illegible] ASTM, for example, develops full consensus standards with the belief that input from all concerned parties in the development of a standard will assure technically competent standards having the highest credibility when critically examined and used as the basis for commercial, legal, or regulatory actions. (In fact this is the ASTM definition of the term.)

[illegible] RCS defines Conformity Assessment as ensuring, either directly or indirectly, that desired requirements are being met.

[illegible] The Alliance for Redesigning Government has defined Performance Measurement as: "Data that show the progress toward specific results targeted by specific actions, thus providing a way to evaluate the performance of the actions."

[illegible] Let's be real. Only by Stewardship will we ever realize riverway sustainability, healthy land, healthy water. All of the government agencies in the world cannot, by themselves deliver. They are often caught up in the "world of short-term decision making, protecting '[illegible]' and people problems."

[illegible] Particular attention can be paid to the NPS-owned islands virtually within [illegible] limits. I cannot count the number of times I have seen orange-clad hunters driving the islands opposite the City of Marine on St. Croix (Minn.) during the Wisconsin Deer Hunting season coincidentally with canoeists proceeding down the river. As this is written (the day before the opener) it will happen again tomorrow. (Noted later: It did.)

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7. Comment noted. See the response to comment 6 above.

8. Regulation of hunting is beyond the scope of this plan. Hunting regulations are determined periodically by the two DNRs.

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allowing the use of rifles on these Islands within the riverway boundary is sheer insanity and grossly irresponsible for public safety reasons.

9 Also on this page and in the RECREATIONAL MANAGEMENT section, it is recommended that the word "kayaks" be included under water uses. Observers will confirm kayaks as the fastest growing watercraft class in the WMA designated in the draft EIS as QUIET WATERS.

10 10. Page 39 – In the section INTERPRETATION there are three uses of the word "could." It is recommended these sentences be written replacing the word "could" with "should" to indicate the agencies genuinely desire to accomplish same.

11 11. Page 47 – Land- and water-use definitions are complicated on this page and on Page 56. The picture used on the lower right of Page 47 is cited as an example of RURAL RESIDENTIAL. It is, in fact, a home in the City of Marine on St. Croix. The home fronts on Judd Street. This home has been maintained and preserved under the former land-use management area of urban, under the Zoning Ordinance of the City of Marine. It should come to no surprise that the appearance of this home is quite typical of homes located within the riverway boundaries in Marine. Thus, it is recommended you reconcile the language describing Marine found on Pages 142 and 143 and its so-called "developed residential shoreline" with the reality of this archetypical setting as found on Page 47. It is also recommended you define the phrase "developed residential shoreline."

The photo you have chosen as an *example* of RURAL RESIDENTIAL is a home that, under the draft EIS's Preferred Alternative will be located in SMALL TOWN HISTORIC. Thus, it is recommended the *picture* used on the lower right of Page 47 (now being employed in the draft EIS as an example of RURAL RESIDENTIAL) be cited in the Final CMP as an example of *what should be expected of properties* on the shoreline within the SMALL TOWN HISTORIC riverway boundary.

The SMALL TOWN HISTORIC photo found on Page 45 shows two buildings in the Village Center, formerly known as the Central Business District, of the City of Marine on St. Croix. The draft EIS has no example of a residential shoreline in SMALL TOWN HISTORIC.[29]

12 12. Page 56 – The picture used on the lower left of Page 56 as offered by the draft EIS as an example of NATURAL WATERS is, in fact, a seasonal home of in Otisville (Minn.).[30] This residence has been maintained under the soon-to-be-former land-use management area of rural. This home is quite typical of homes within the riverway boundaries in Otisville. It is suggested you reconcile the language descriptive of Otisville found on Page 142, and its so-called "moderate development," with this archetypical setting on Page 56. It is also recommended you define "moderate development." It is

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[29] But, it then again, it does have a photograph of a home that will be in SMALL TOWN HISTORIC found on Page 47.

[30] These seasonal homes, like many others on the Otisville (Minn.) shoreline of the riverway, have been owned by the same families for almost 50 years.

RESPONSES

9. The reference is clearly not intended to be a complete list but only a few obvious examples.

10. The text has been corrected.

11. Photographs used in the final plan have been changed to better reflect the character of the land use areas.

12. See the response to comment 11 above.

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recommended the Final EIS and CMP reference the photo[21] on Page 47 as a standard for RURAL RESIDENTIAL.[22]

If, as the draft EIS implies, Natural Waters should be bordered by homes such as exemplified by the photographed Osceola home, the water usage and zoning could have reflected Natural Waters, i.e., no wake and/or SILENT BOATING. The draft EIS's Preferred Alternative, indeed all of the Alternatives, has the river's waters in front of this cabin designated by the draft EIS as QUIET WATERS.[23] The WMA of SILENT BOATING was not found in any of the A-to-D Alternatives presented by the Task Force consensus.[24]

13. Page 63 -- The TABLE 4: LAND MANAGEMENT AREA BOUNDARIES IN THE PREFERRED ALTERNATIVE provides an opportunity to comment on the Land Segments as it relates to the description of the northern boundary of developed Marine on St. Croix.[25]

There is a segment directly south of O'Brien State Park to the edge of Marine's continuous development that has been protected as a shoreline area being ancient and different from the "natural boundaries of Marine."[26] Under PRS 75-69 and the Master Plan these lands are designated rural. With the publishing of the draft EIS, this portion directly South of O'Brien yet within the City Limits of Marine is now called: "South end of William O'Brien State Park to Southern tip of Greenberg Island in Marine-on-St. Croix (sic[27])." In reality, Greenberg Island is a series of State-owned and part of O'Brien State Park islands[28] that end approximately at the original boundary adopted by Marine on St. Croix in response to the Critical Areas Act and the Minnesota Statute 103F.351.

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[21] Comments 11 and 12 illustrate the difficulty of using photos that are not representative with the point trying to made by the draft EIS. In the cases of both Page 47 and Page 56, photos are used to typify a less developed situation than the actual Land Management Area in which they would be located under the draft EIS. It would be a grievous mistake to remove these two photos from the Final EIS. Their beauty and preservation is a genuine credit to both homeowners, to wit that they are now recognized for being typical of a more restrictive zone than in which they actually reside. My fear in citing these photo placements is that they will, in fact, be removed. It has been recommended that the Final EIS contain these photos with notation or footnote of the actual zone to which they will belong.

[22] RCS would not accuse the editors of having done a "dumming down" by using these photos to represent more restrictive situations. Rather, in the myriad of photos available to the agencies these were probably chosen as outstanding examples of the zone being presented in the draft EIS.

[23] How ironic that the draft EIS would employ a QUIET WATER residence to indicate NATURAL WATERS. This possibility would have been debated if old Alternative E had not been removed through Staff action. The draft EIS, in its selection of the photos in this Comment, again makes the case why old Alternative E must be included in the Final CPM Preferred Alternative.

[24] The WMA of SILENT BOATING was introduced in the caucus debate by the group representing Alternative D for certain Back Channels.

[25] At the first Task Force workshop, these boundaries and segments were created so to ease how the land segments would be viewed from the River.

[26] This separate classification goes back to Minnesota Governor Wendell Anderson-sponsored Critical Areas Act action that produced Minnesota Statute 103F.351 Page 297.

[27] Marine's official name is without hyphens.

[28] In low water conditions, the Greenberg islands are contiguous.

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RCS Foundation Response to the Draft Cooperative Management Plan Environmental Statement 11/30/1999 13 It is recommended that the existing boundary, i.e. the northern boundary of the Henderson land, still be considered the boundary between the Land Segments of RURAL RESIDENTIAL and SMALL TOWN HISTORIC. The Land Segment "South end of William O'Brien State Park to Southern tip of Greenberg Island in Marine-on-St. Croix" has served its Task Force function of providing a visual cue from the river. With the adoption of the Preferred Alternative comes the need to recognize lines historically used.[39] It is recommended this exact boundary be retained.	13. The exact boundary will be used as recommended when detailed district boundary maps are prepared.

14. Page 68 -- The promotion of the section WATER SURFACE USE had considerable problems and consensus[40] was not built. When the Task Force consensus debated WATER SURFACE USE, the four Alternative Groups A through D began first by a consideration of upstream areas and then proceeded south or downstream. The WMA for Silent Boating was not found in any alternative.[41]

As the Alternative Groups A through D caucus-debate proceeded downstream, the caucus leaders of Alternative A ultimately acquiesced to members of the St. Croix Waterways organization.[42] It is clear that the draft's EIS's Preferred Alternative for WATER SURFACE USE, *in part*, represents the Agencies' recommendation.[43] But, can the agencies imagine if the Alternative D caucus had had an allied old Alternative E caucus in place during the WATER SURFACE USE debate and Alternative A was never born in the debate?[44] Consensus still may not have been reached. But, any observer that day would have to agree that the full spectrum of WATER SURFACE USE was not debated and so the draft EIS's Preferred Alternative WATER SURFACE USE is distorted. It is recommended the record of decision correct this distortion.

15. Page 72 -- The section CULTURAL RESOURCES MANAGEMENT is supported.[45]

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[39] There really is little or no discrepancy, but there also should be zero possibility that this boundary would ever become confused. The Marine Clerk Ginger Bolin at 651.433.3636 can provide the exact property designation of the rural/urban boundary as it now exists in the Marine Zoning Ordinance.

[40] True consensus means that a majority of those involved enthusiastically support the standard with the minority agreeing to acquiesce to the opinion of the majority.

[41] This WMA was only added later in negotiations regarding consideration of some higher speed boating below Arcola Sandbar. The A-to-D caucus group never had the opportunity to address the full implications of old Alternative E's WMA as an viable alternative for use in the main channel for canoes already outlined. The elimination of this alternative was in violation of NEPA.

[42] The Leaders of the Alternative A caucus expressed to the group that they did not personally go along with the St. Croix Waterways' position of unlimited speed.

[43] The matter of speed in the lower regions of the Lower St. Croix was not reconciled during the process.

[44] To be sure, the St. Croix Waterways people would have had to move to Alternative B. Would they have had the identical impact on the Alternative B caucus leaders? We shall never know.

[45] This section recalls the City's (then called the Village of Marine on St. Croix) September 21, 1974 comment in general support for the original Lower St. Croix Environmental Impact Statement (FES 75-69). The Final Master Plan, dated February 1976, was based upon this Lower St. Croix Environmental Impact Statement (FES 75-69). The City's position continued with a follow-up letter in the form of a Comment dated October 16, 1974. One of the handful of issues was the "Historical Designation of Marine Historical District" -- The Comment read in part: "The Master Plan and the (Lower St. Croix Environmental Impact Statement [FES 75-69]) should reflect this." Also the Comment asked the agencies to have the Master Plan "allow consideration of the historical integrity of certain structures within the Marine Historic District if an alteration of a building is proposed."

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14 16. Page 76 – Section ALTERNATIVE A is renamed the Nicks and Cuts Alternative and should be removed.[45] It is impossible to reconcile the verbiage "did not significantly change," with "preserve". The dictionary defines significant: important, of consequence. In order to emphasize why Alternative A be removed, the sentence beginning the 1st paragraph under Alternative's A MANAGEMENT CONCEPT is rewritten to contain the actual definition of significant versus the word itself. To wit: "Unlike the preferred alternative, as long as users were not causing (important, of consequence) damage to the riverway's exceptional resources ... no efforts would be made to regulate user activities."

What a management concept! What a moral concept! Former Senator and Vice President Mondale cautioned us just two years ago about the St. Croix River succumbing to his phrase of countless "nicks and cuts?"[46] Each little nick and cut is probably not significant, not important, not of consequence, but nicks and cuts accumulate, as Mondale points out[47].

As all who love the St. Croix know, Mondale, along with former Senator Gaylord Nelson (D.Wisc.), authored both the original enabling legislation plus the site-specific Bill protecting the Lower St. Croix River from Taylors Falls (Minn.) to Prescott (Wisc.). If Senators Mondale and Nelson had been in active service to the Task Force do the agency people really believe that these men would have allowed the low moral alternative of Nicks and Cuts to have its place at the esteem consensus table?

Well, Nicks and Cuts was at the table and the restoration alternative was not. Here is what is written in the ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY on Page 114 where it sums it up what was missing from the Task Force's esteem debate on Preferred Alternatives:

> "Increased efforts ... on restoring natural landscapes compared to other alternatives," "more restrictions ... placed on new developments," "natural quiet ... encouraged" and "banning all motor[illegible]" in certain locations.

Also, consideration of a regional, interstate transportation scheme, noise-control from high-speed highways, increase in government funding for land and scenic easement acquisitions did not have its place at the esteem consensus table.

A was there. Old E was not. It is recommended the agencies remove Alterna[illegible] from the final EIS. Its inclusion is an ethical travesty.[48]

17. Page 105 – Under the section RIVER CROSSINGS: "The managing agencies would also encourage a reduction in utility lines." It is recommended that the managing agencies go beyond this language and exact more direct. As the agencies know full well, the indirect consequences to RIVER

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[45] Alternative A is not even a "no-harm" alternative, – no-harm itself being a rather low moral hurdle. Alternative A represents the tyrannical force of accumulated small, i.e. "not ... significant" decisions.

[46] The nicks and cuts observation was given by Mondale on October 9, 1997 before the St Croix River Association (SCRA) celebrating the 25th anniversary of the inclusion of St Croix National Scenic Riverway into the U.S. federal rivers system.

[47] Mondale also called out that the St. Croix continues to receive significant threats from pollution and developers.

[48] It is not a genuine NEPA alternative, except to those living in the "world of short-term decision making, to (those) promoting "[illegible]" or to be more succinct, to those attempting to somehow placate the local speculators and laissez-faire boosters.

14. See the response to comment 2 above.

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CROSSINGS is substantial. Twenty years is a long time. With the emergence of fuel cell technology, the need for more power line crossings should be diminished.[80]

15 It is recommended that the Final EIS call for an annual formal review with the utilities. The review does two things. First, it emphasizes the agencies' commitment to their crossing philosophy. Second, it allows the agencies to emphasize to the utilities that they consider alternative technology and its implications in their unrelenting desire to cross protected rivers.

18. Page 143 – In the section Marine Area (McLeod Slough to Arcola Sandbar via Page's Slough; 8.5 miles) is a description of Marine on St. Croix. There is a substantial linear shoreline within the Municipal limits of Marine currently zoned rural. The draft EIS reads as follows: "Downstream of (O'Brien State Park) lies the developed residential shoreline of Marine, which is predominantly historic in character." RCS's Comment 11 says Marine's shoreline is quite well preserved even to the selection of a Marine Home to receive RURAL RESIDENTIAL on Page 47. 16 Page 143 language does not acknowledge that a substantial portion of land immediately south of the Park is quite NATURAL with a single historic 1914 cottage[81] as the only structure able to be viewed from the river.

17 The Marine Area (McLeod Slough to Arcola Sandbar via Page's Slough; 8.5 miles) section would also be the appropriate place to highlight the large percentage of main channel that is either less than 200 feet wide or only slightly wider than 200 feet. This fact is significant as current State law says that if your boat is within 100 feet of a shoreline, you are expected to proceed at a slow/no wake or about 5-mph.[82]

Also in the Marine Area (McLeod Slough to Arcola Sandbar via Page's Slough; 8.5 miles): "The Wisconsin side of the river is natural in character with few signs of development, and the shoreline is predominately NPS fee properties with scenic easements near the riverway boundary."

18 First, under all of the Alternatives, this property has been given the classification of MINIMALLY DISTURBED, not NATURAL. This may be the cause of some confusion to a reader. The second part of the sentence is also not clear. Rather than wordsmith it, this is the condition. The NPS owns substantial portions on this property in fee. On that land which it does not own in fee, it has obtained scenic easements, -- most of which can be found near the riverway boundary. It is suggested the Final EIS language represent the actual NPS ownership of both lands in fee and scenic easements.

19. Page 143 (continued) – The term "Dead Man's Slough" is used by locals to describe a number of sloughs in this section. The Dead Man's Slough of the draft EIS is the one opposite Camp Kiwanis.[83]

19 20. Page 146 – The St. Croix has been studied. It is now recommended action be taken. It is also recommended that the Final EIS highlight the high-speed boating deaths that occurred on the Lower St. Croix.

21. Page 161 – Neither Mercury consumption advisories nor St. Croix smallmouth "slot limits" is well known. Unlike rules regarding the size of Muskies, no information on smallmouth is posted at landings.

22. Page 166 – As an avid St. Croix fisher I can fully attest to the loss of bullheads. They were present and often caught years ago. They are now gone. Let's also reduce the rusty crayfish. The single biggest enemy of the rusty crayfish is the smallmouth bass.

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[80] See "At Last, the Fuel Cell," *The Economist* (October 25, 1997) 89-92.

[81] Owned by the St. Croix Watershed Research Station.

[82] See Comment 30.

[83] The camp is located within the limits of Marine on St. Croix, near its southern border.

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RESPONSES

15. The recommendation is noted, but is beyond the level of detail of this management plan. An annual meeting with utilities is just one tool management may consider for advancing the goal to reduce utility lines.

16. The text is intended to describe the general character of the area.

17. Detailed maps delineating the shore activity zones (and where they overlap) will be prepared when water surface use regulations are being developed to implement portions of this plan.

18. Comment noted. The section is intended to provide a general description of the stretch of river, not to detail ownership patterns.

19. Language has been added to the "Conflicts Between Boaters" section (page 14 of the draft plan) to make clear that boater safety is a management issue.

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24. Page 167 – Help with the native mussel problem could possibly come from Catch-and-Release of smallmouth. Better science would tell us.

20 25. Page 173 – It is inaccurate to write that the "Wild and Scenic Rivers Act originally excluded the lower St. Croix River." While it is true that the upper St. Croix was made an "instant" river, the Act very clearly includes the lower St. Croix as a study river.

26. Page 174 – The section CULTURAL LANDSCAPES: "Some settings within the riverway may be determined to be important illustrations of the cultural impacts on the riverway." (Emphasis added.) Marine Historical District has been a federally recognized as having a cultural impact since 1974. A reading of documents surrounding its application and acceptance indicates how intimately bound-up the Marine Historical District is with the riverway – from an historical perspective, – from a cultural perspective." It is recommended the CMP's CULTURAL LANDSCAPES section state that the Marine Historical District is an example of an Historical District with a recognized cultural impact on the riverway. 21

27. Page 180 – The riverway lands of the states of Minnesota and Wisconsin are under extreme development pressure today because the State Governments choose land-use controls over fee acquisition. On the other hand, NPS listened to Marine[25], so today we have Public Law 95-421[26] where the original Lower St. Croix Act of 1972 "is amended by deleting '$7,275,000' and inserting in lieu thereof '$19,000,000'." That has made all the difference for federal portion.

It is never too late for either the federal or state agencies to obtain further funding for riverway protection. RCS argues that the failure of the Task Force to bring forward its old Alternative E for consensus precluded the possibility that a Preferred Alternative would have had a further increase in government ownership.

28. Page 197 and 198 – The Preferred Alternative: "In addition to the application of land management areas to segments of the riverway, [the plan calls for] encouraging the maintenance and restoration of the natural diversity and ecological integrity of significant plant communities on public and private lands which would result in the visual landscape becoming more representative of the native cover of the area." The islands opposite Marine are an example of plant communities deserving "maintenance and restoration."

Here is what the NPS's St. Croix "GOVERNMENT PERFORMANCE AND RESULTS Act's (GPRA) Strategic Plan FY 1998 - 2002 that deals with this subject says today:[27]

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[24] Marine was the home of original St. Croix logging operations and was one of the portals for the earliest Swedish emigrants.

[25] On October 16, 1974 of Marine on St. Croix's position on the original EIS had section entitled; "Zoning as means of Preservation" – The October 16, 1974 Comment read in part: "No preservation can be guaranteed or even preferably assured by sole reliance of zoning." And later: "The almighty dollar is king in this valley, and while it has been the position of our Council to retain local control in matters of this import, it takes a higher form of government to set the standards and indeed promulgate a policy of fee and scenic easement acquisitions."

[26] Public Law 95-421 of the 95 Congress, S. 3022, Sec. 2, Subsection (a) found on Page 206 of the draft EIS.

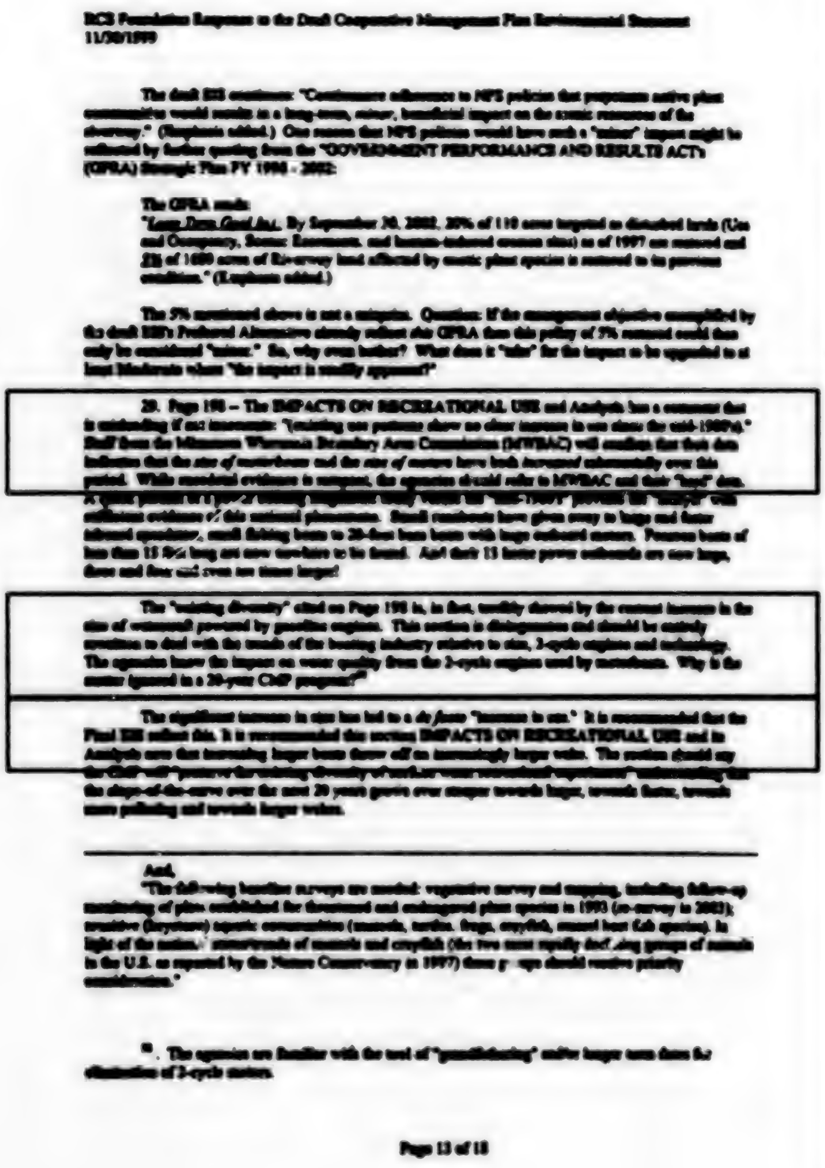
[27] "Long Term Goal Ib1 By September 30, 2002, a comprehensive inventory and monitoring system for the Riverway's fish, mussels, amphibians, reptiles, and vegetation will be active on 50 percent of all land and water within the Riverway boundary; acquire or develop digital data sets covering 75% of all land within the Riverway boundary and consisting of the following themes: vegetation or land use/land cover, soil, and surficial and bedrock geology; and sixty percent of the major tributaries to the Riverway will be assessed to determine their impacts to the Riverway's water quality."

RESPONSES

20. The text has been corrected.

21. Pending completion of the noted cultural resources inventory, it is premature to make the recommended statement.

COMMENTS	RESPONSES



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22. The text is correct, according to MWBAC data. There has been an increase in larger craft and an offsetting decrease in smaller craft, but overall use has not increased. MWBAC data cannot determine horsepower. See also page 150 of the draft plan.

23. Recreational use of the riverway remains diverse, as correctly noted in the referenced text on page 198 of the draft plan. The dominant use from O'Brien State Park north is nonmotorized. Use between O'Brien State Park and the Arcola Sandbar is a compatible mix of nonmotorized use, small fishing boats, and slow-moving pontoon boats. All types of motorboat use occurs south of the Arcola Sandbar. The trend toward increasing size among motorboats south of the Arcola Sandbar has been noted in a revision to page 150 of the draft plan. Large craft are less likely to use two-cycle engines. The imposition of speed limits will prevent increasing size from impacting the diversity of uses in that southern area (see the response to Minnesota-Wisconsin Boundary Area Commission comment 2.

24. The text on page 150 of the draft plan has been corrected to note that there has been a trend toward larger craft south of Stillwater.

COMMENTS

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Attempts are made by the managing agencies to manage the relatively small acreage of water found in this area into boating that encourages quieter motors, slower speeds. Boaters and their guests then realize "destination-experiences," i.e., Point A-to-Point B boating versus an iterative round-and-around individual pleasuring-experience. This latter activity could be labeled Point A-to-Point A in quick fashion.

By definition, Point A-to-Point B boating is a linear, i.e., straight-line outing. Shore-locked river users then view a boat proceeding on the river. In a relatively short time the craft is gone from view, usually not seen until much later in the day.[39]

QUIET WATERS does not guarantee quiet. Some normally Point A-to-Point B recreational boaters are deploying "towables," hauling persons through the water, most usually at a speed in excess of the desired slow speed. More often than not, these towables are of the floating surfboard-type connected to a pontoon boat by a towrope.[40] Large inner tubes are also seen used for the same purpose. Round-and-round, Point A-to Point A.

25 It is a challenge to plan for technology changes vis à vis water-surface zoning, let alone draft an all-encompassing standard regulation. But, future IMPACTS ON RECREATIONAL USE will be impacts caused by changes in technology. Boating technology has already had its impact on St. Croix River water surface usage.[41] It is recommended that Analysis section for the Preferred Alternative deals with the history, the trends, prior management actions and future technological possibilities: First, present technology as a management framework concept. Second, emphasize desired destination-experiences as that for which QUIET WATERS are named. (Quiet waters are what quiet waters do.) Lastly, the Final EIS and CMP Analysis section should outline and address the history of a Plan recommending one thing and agency actions providing another result.[42]

In summary, most agree that the "recreational experience" has degraded over the last quarter-of-a-century. With the draft EIS's Preferred Alternative it will continue to degrade. " RCS says that the "[E]xisting use patterns show no clear increase in use since the mid-1980's" is not the Analysis this issue and the CMP deserve.

30. Page 159 -- The Section IMPACTS ON RECREATIONAL USE and Bullets of the St. Croix to Rock Islands: 3.5 miles and Rock Island to McLeod's Slough: 10 miles and "McLeod's Slough to Arcola Sandbar: 8.5 miles deal with the Quiet Waters classification. The draft EIS reads for

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[39] Obviously, in most situations, St. Croix boaters do return to their starting point that same day.

[40] Here the rider either stands on the board or sits in the tube with the boat's driver more-or-less in control, ... until recently, when K2 has introduced the Zig™, "a towable with an innovative patented steering mechanism." The picture of the Zig™ featured in the K2 1997 Third Quarter report shows a young, hair-tossed rider literally flying over the water.

[41] Witness the current jet-ski zoning.

[42] Among the historical Final Master Plan of February 1976 RECOMMENDATIONS on page 6 it reads: "Water zoning, including 'No Wake' and speed zones, should be adopted as a means to *prevent degradation of the recreational experience* and to enhance water safety." (Emphasis added.) In order to prevent degradation, the original Master Plan included an Appendix "SUGGESTED MEASURES FOR ENHANCEMENT OF WATER-BASED RECREATIONAL USES OF THE LOWER ST. CROIX RIVER," where the MWBAC recommendation was proffered: "The reach of the St. Croix River from the dam at Taylors Falls to River Mile 30.25 and from the Soo Line high bridge to River Mile 27 (2.5 miles above the upper limit of the Federal 9-foot navigational channel above the Stillwater Bridge) should be designated "Slow-No Wake Zones." The managing agencies are well aware that this MWBAC recommendation proceeded down a management course from first considering "Slow-No Wake" to the adopting minimal wake and finally today to -- slow speed.

RESPONSES

25. It would be speculative for the plan to develop policies relating to possible future evolutions in technology. The plan provides the framework for managers to respond as needed to changes in technology that might occur in the next 20 years.

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reads: "The quiet waters classification for this segment would be identical to the existing slow-speed designation."

The "Quiet Waters" WMA in the St. Croix (main channel between Taylors Falls and Arcola) Motor Speeds begs for max of 8-mph, as this Comment will outline. Today, most boats in this region generally operate at slow speeds of 8 mph. The meeting minutes from the August 18, 1998 Lower St. Croix Management Commission (LSMC) meeting read as follows (in part):

> *"The public was invited to further comment on issues before the LSCMC took action. A summary of these comments follows (in part): ... Most boats travel at 8-mph in 'quiet' areas—have that be the designated speed limit."* (Emphasis added.)

Most water surface area North of the Arcola Sand Bar could be considered "slow no wake" under existing Rules. The main channel is often 200 feet wide or narrower. The slough widths are always less than 200 feet wide. This relatively narrow width implies a slow no-wake operation as watercraft movement is generally within 100 feet of the shore. Where the channel of the St. Croix is slightly wider than 200 feet, the existing slow no-wake Rule (if followed) would require boats to travel in a narrow corridor, i.e., to motor up-and-down a slot located exactly between the two shores. This slot, where it does exist, generally is less than 50-100 feet wide. However, with the extensive sandbars found during normal-to-low water in these regions on St. Croix, seldom does a boat run in the middle of the river, i.e., within the narrow corridor.[63]

26 Travelling motorboats have to adjust to the location of the sandbars with boat movement usually much less than 100 feet from the shore and/or close to the activities of swimmers, fishers, canoeists, kayakers and floaters.[64] The existing slow-speed designation, which provides substantial wakes in some small, pristine regions. Technology has provided improved wake-zone tools for measuring boat speed. 8-mph is the right speed.[65] It is recommending that the designated speed of 8-mph symbolizes to users of this QUIET zone of the river that it really is designated "quiet."

31. Page 202 and Page 203 -- In the discussion regarding the Preferred Alternative under Vegetation and Analysis: "Motorboat use on the lower St. Croix is believed to be affecting shoreline vegetation, with boat wakes damaging plants, exposing root systems, and undercutting trees." (Emphasis added.) In order to preserve, i.e., keep alive or in existence; make lasting, and to keep from harm or injury and save[66] plants, and not expose root systems, and undercut trees[67], it is recommended the managing

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[63] This corridor could itself also be the location of swimmers, floaters, canoeists etc heading down river.

[64] The main channel running along the northwestern portion of Greenberg Island opposite O'Brien State Park north of Marine on St. Croix (Minn.) found in the draft EIS's area McLeod's Slough to Arcola Sandbar: 8.5 miles provides an excellent example of boat movements in normal-to-low water levels. Water in this region moving down the St. Croix has three courses when it reaches the State park, -- two sloughs on either side of islands flanking the main channel or the main channel. Along the east shore of Greenberg Island, within the main channel, there exists a substantial sandbar originally created by a wingdam placed in the XIXth Century by logging interests. For most of the summer, a boat can only proceed along the Wisconsin side of the main channel. The boat will be located well within 100 feet of the shore. Boats so moving are generally not proceeding at slow-no wake.

[65] Last summer's experience of property owners and the DNR in the so-called Quiet Lakes in Northwestern Wisconsin indicates the 10-mph as posted here is largely ignored on these lakes. It should be 8 mph.

[66] Thus using the definition of the word "preserve."

[67] All detrimental to the riverway.

RESPONSES

26. The plan has been revised to show that the "quiet waters" water management area will be implemented through requiring a "slow speed" speed limit, which is defined as "a leisurely speed, whereby the wake or wash created by the motorboat is minimal, but in no case greater than 15 mph."

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[illegible]

agencies provide greater control the wakes o[illegible]es.[68] The draft EIS's Preferred Alternative falls short and it is recommended that this be corrected.[69]

It is recommended a major change be made in the section Vegetation and Conclusions: "From a riverwide perspective, *most of the riverway's vegetation would not be affected by users, new developments, or the management agencies.*" (Emphasis added.) A review of this syllogism indicates how silly this sentence is. The draft EIS's Preferred Alternative states a statement to which we agree to wit: "Motorboat use on the lower St. Croix is believed to be affecting shoreline vegetation, with boat wakes damaging plants, exposing root systems, and undermining trees." And yet, the agencies must admit – wakes come from boats operating at slow speed and above. Stated another way: "no wake" means no wake. But, wakes are allowed virtually everywhere on the riverway under all speed classifications — with the exception of; a) SILENT BOATING found only in the backwaters north of O'Brien State Park, b) where the boat is 100 feet from shore, and, c) in the no wake NATURAL WATERS in the Rice Lake region.

27 It is thus recommended the agencies drop the word "not" in the draft EIS's sentence: "From a riverwide perspective, most of the riverway's vegetation would not be affected by users, new developments, or the management agencies."[70] The sentence should now read: "From a riverwide perspective, most of the riverway's vegetation would be affected by users, new developments, or the management agencies."

28 32. Page 204 – The threat to our riverway's federally listed Threatened and Endangered Species can be considered largest from the introduction of zebra mussels. Can the managing agencies provide the wide range of recreational opportunities under the Preferred Alternative and still protect the mussels? BCS cites the priceless Franconia mussel beds containing Threatened and Endangered Species to state a resounding NO to the above question. What is the value, in the aggregate, of the easy access of boats over these beds from waters-we-know-not-where?[71]

I overheard a senior official from one of our State's Department of Natural Resources, a person not directly responsible for riverway policy, recently answer a question about a problem on the Great Lakes. This person spoke of the tension within the (Minnesota DNR) Agency between the what I will call, recreationists and the conservationists. Who wins the battle of easy, unregulated access of boats from waters-we-know-not-where to the upper portions of St. Croix and its Threatened and Endangered Species? The recreationists or the conservationists?

All other management methods of damaging zebra mussel transplantation pale in comparison to the access question. In a word, the riverway's management framework is *recreation-based* as it now exists in the draft EIS. The Threatened and Endangered Species protection "act" is not together. After the Higgins' eye and winged maple leaf are gone future historians will look back and review just how the riverway's management framework led to their demise and they will note how the recreationists, not the conservationists, dominated that debate.

Of course, it is still not too late for the mussels. Again, the record of decision could reflect the acceptance of a management framework that will lead to a genuine protection of these critters. Anything short of shutting down or better managing these accesses condemns the ENDANGERED SPECIES

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[68] It should be obvious to the managing agencies that the "existing diversity of surface water recreational experiences" can still be present (in some large areas of the riverway) with proper control of wakes.

[69] Old Alternative E's concept would have spoken to this issue.

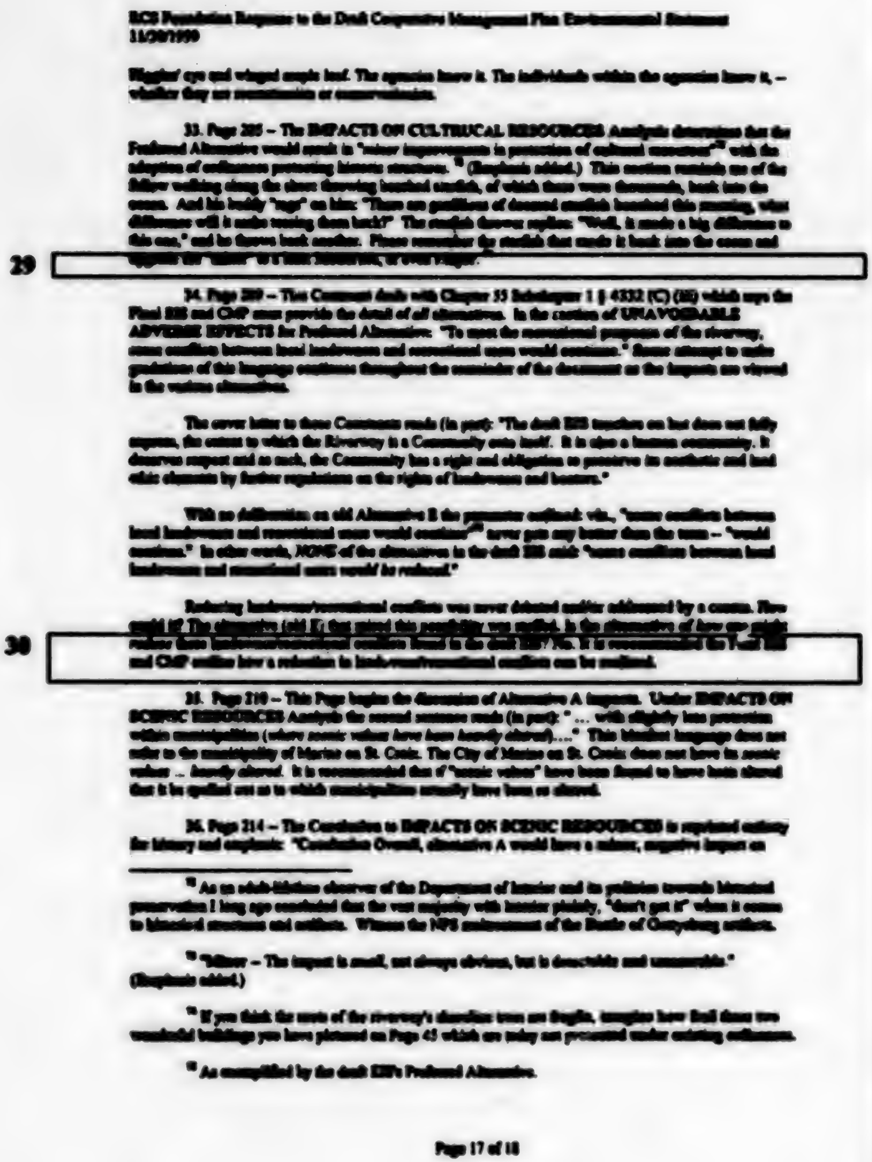
[70] This section under Vegetation and Conclusions is an excellent example of how Orwellian some Alternative A aspects of this draft EIS Preferred Alternative, in fact, are.

[71] Boats not inspected for Zebra Mussels may enter the riverway at any number of access points and motor to the Franconia beds location.

27. While some vegetation would be affected by recreational users, residential development, and management actions to restore native plant communities, these impacts would be extremely local. Overall, most vegetation in the riverway would not be affected.

28. This plan will be implemented consistent with the U.S. Fish and Wildlife Service's recovery plans for the winged mapleleaf mussel and the Higgin's eye mussel, and with the *Zebra Mussel Task Force Action Plan*. Implementation of the *Zebra Mussel Task Force Action Plan* has prevented infestation of the riverway by zebra mussels.

COMMENTS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RESPONSES

29. Thank you for your confidence in the measures proposed to help protect cultural resources. However, we believe the impacts that can be reasonably expected are most consistent with the definition of a "minor impact" as described on page 193 of the draft plan.

30. The plan has been revised to clarify that conflicts between landowners and recreational users would be reduced by boat speed limits, restrictions on camping, and increased law enforcement.

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scenic resources compared to the no-action alternative. Also, potentially major long-term impacts from changes to river crossings could still occur." And to restate the definition: "Minor – The impact is small, not always obvious, but is detectable and measurable." (Emphasis added.)

If the first sentence of the Conclusion is rewritten by replacing the word "minor" with the draft EIS's full definition of minor in its place we read: "Overall, alternative A would have a (small, not always obvious, but ... detectable and measurable) negative impact on scenic resources compared to the no-action alternative."

In short, the Conclusion vilifies the work of the Department Interior in the early 70's, -- work now unfortunately nicknamed "the no-action alternative" and compares the Final EIS 73-69 work as essentially equivalent to Alternative A.

37. Pages 223, 237, 247, 261 and 269 -- Again, the UNAVOIDABLE ADVERSE EFFECTS: "To meet the recreational purposes of the riverway, some conflicts between local landowners and recreational users would continue (and likely increase [Pages 223 and 269]).

Under the draft EIS's Alternatives A through (new) E the recreational users seem to, at very least, win. And on Pages 223 and 269 they win big. Where is the scenario where local landowners might win? Where is the scenario where the riverway's natural resources win? Where future generations might win?

38. Conclusion -- "The St. Croix River is our legacy; it is worth saving." Unfortunately this draft EIS sets back the St. Croix of our grandchildren. It did not have to be that way. They should have had a place at-the-table. I have tried my best to be their voice, to make their claim.

These Comments are made under *Title 40--Protection Of Environment, Chapter V--Council On Environmental Quality, Sec. 1503.4 Response to comments.* These responses have primarily evaluated Alternative A and old Alternative B as they relate to the Preferred Alternative. To paraphrase 40CFR1503.4, these Comments supplement, improve, and/or modify the draft EIS's analyses. Factual corrections have been made and the RCS Comments have cited the sources, authorities, or reasons to back up its recommendations. The Comments have indicated certain situations and areas where errors have been made in order to trigger agency reappraisal.

As a gesture of progress and hope I recommend a courageous record of decision to rectify these draft EIS's errors. It's not too late.

I am available if the agencies have any questions or require clarification of any Comments. These Comments sans footnotes are posted at [illegible] and thank you for this opportunity.

James [illegible]
[illegible]
[illegible]
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651.433.4313 - Fax

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Sierra Club
NORTH STAR CHAPTER

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COMMENTS REGARDING LOWER ST. CROIX NATIONAL SCENIC RIVERWAY DRAFT COOPERATIVE MANAGEMENT PLAN ENVIRONMENT IMPACT STATEMENT

November 29, 1999

Thank you for the opportunity to submit comments on the Lower St. Croix National Scenic Riverway Draft Cooperative Management Plan Environmental Impact Statement (DCMP). These comments are being submitted on behalf of the over 13,000 Sierra Club members in Minnesota. We will present some general comments regarding the overall document and the overarching concepts common to all the draft alternatives. Then we would like to provide specific comments regarding both the Park Service's preferred alternative and the Sierra Club's preferred alternative. Lastly, we will provide very brief comments on why we oppose the other alternatives.

GENERAL COMMENTS:

We want to support many of the general concepts contained in the DCMP and applaud the National Park Service (NPS) for their efforts to develop a management plan that will protect the Lower St. Croix Riverway as a unique and priceless resource for future generations. In particular, we support the following concepts:

1. The acknowledgement that use of the Lower St. Croix by the current generation shall not interfere "...with the rights of future generations to use and enjoy the same high quality resource". The purpose statement on p. 10 clearly gives priority to these concerns, by stating that the first and second purposes of the Lower St. Croix National Scenic Riverway is to: "Preserve and protect (and restore and enhance where appropriate) for present and future generations the lower riverway's ecological integrity, its natural and scenic resources, and its significant cultural resources" and "Accommodate a diverse range of recreational opportunities that do not detract from the exceptional natural, cultural, scenic, and aesthetic resources" (emphasis added).

2. Taking a watershed view of protection of the river and targeting water quality and quantity as critical elements of the final plan, regardless of which alternative is selected. Without controlling chemical and sediment inputs to the watershed in all of the myriad tributaries to the St. Croix River, it will not be possible to protect the river for its many unique characteristics.

1 3. A proactive approach to preventing the spread of zebra mussels into the riverway. We support even greater action on the part of the NPS and state Departments of Natural Resources (DNR) in inspecting and cleaning boats entering the riverway from the Mississippi.

4. The application of additional management areas, to provide more opportunities for varying recreation styles along the riverway.

5. The potential application of camping registration and fees in order to protect the resources of the riverway and to reduce conflicts with landowners.

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1. Comment noted. Actions to implement the Zebra Mussel Task Force Action Plan have thus far been successful in preventing an infestation of zebra mussels in the riverway.

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COMMENTS	RESPONSES

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6. Providing greater access to individuals with disabilities.

7. Recognition of Native American treaty rights within the park unit and coordination with all relevant tribal agencies.

2 We are concerned, however, that the plan does not provide a clear direction for addressing one of the primary areas of concern identified in the "Management Directions Common to All Plans" section, namely air pollution. We urge the NPS to take an even more proactive stance with regard to this issue and seek greater collaboration and cooperation from the states of Minnesota and Wisconsin in developing a comprehensive regional transportation plan for the St. Croix River Valley area. This is the only way to address the issue of air pollution, which will become decidedly critical in the next decades as the "sprawl front" of the Twin Cities crosses the St. Croix River.

In general, the North Star Chapter of the Sierra Club supports Alternative D, except that it provides no opportunities for [illegible] recreational uses (see our specific comments on Alternative D, below). Only Alternative D goes far enough in prioritizing resource protection to satisfactorily approach the goals and purposes for the riverway outlined on pages 10-11. Without the level of resource protection described in Alternative D, we doubt the NPS will be able to preserve and protect the St. Croix Riverway for present and future generations. The coming decades will be a time of great pressure on this unique riverway located so close to a sprawling metropolitan region. Without strong protections in place, we fear the unique values that make the St. Croix River worthy of protection will be lost under the crush of development and overuse. It is critical to adopt a plan that stems this tide, before it is too late.

SPECIFIC COMMENTS:

NPS's PREFERRED ALTERNATIVE

3 Land Use (p. 61) -- We believe that if industrial uses within the riverway are discontinued, priority should be given to parkland and recreational use of the land, before commercial or residential use. This would be particularly important in cases like that of the Allen S. King plant, which would provide tremendous parkland opportunities when the plant is decommissioned, as is likely to occur in the next century. While we support Alt. A, one concept I mention which appears to be missing in the Preferred Alternative is that

4 of encouraging local governments to cluster new development in the riverway towns (see p. 79), which we support.

Land Use Map (p. 62) -- We believe the goal of the preferred alternative should be to limit the amount of urban and suburban sprawl that occurs within the river valley. Containment of growth along the river will

5 be critical to controlling sediment and chemical inputs to the river. The "developed" zone surrounding the city of Stillwater is quite large, allowing for significant urban development of areas currently developed more in tune with the small town or rural residential designations. Similarly, the areas which contain

6 Afton and William O'Brien State Parks should be zoned "natural" (as shown on the maps for Alternatives B and C), rather than "park", which provides a much more intensive level of use and development. We believe this zone should be redrawn to more closely reflect current conditions.

Vegetation Management (p. 63) -- While we support the goal of providing vegetative screening for structures along the riverway as part of the scenic easement of the river, we believe it is equally important

2. Air quality in the riverway is good but is modestly affected by the adjacent metropolitan area. It is not anticipated that air quality in the riverway would be affected by implementation of any of the alternatives, as noted on page 193 of the draft plan.

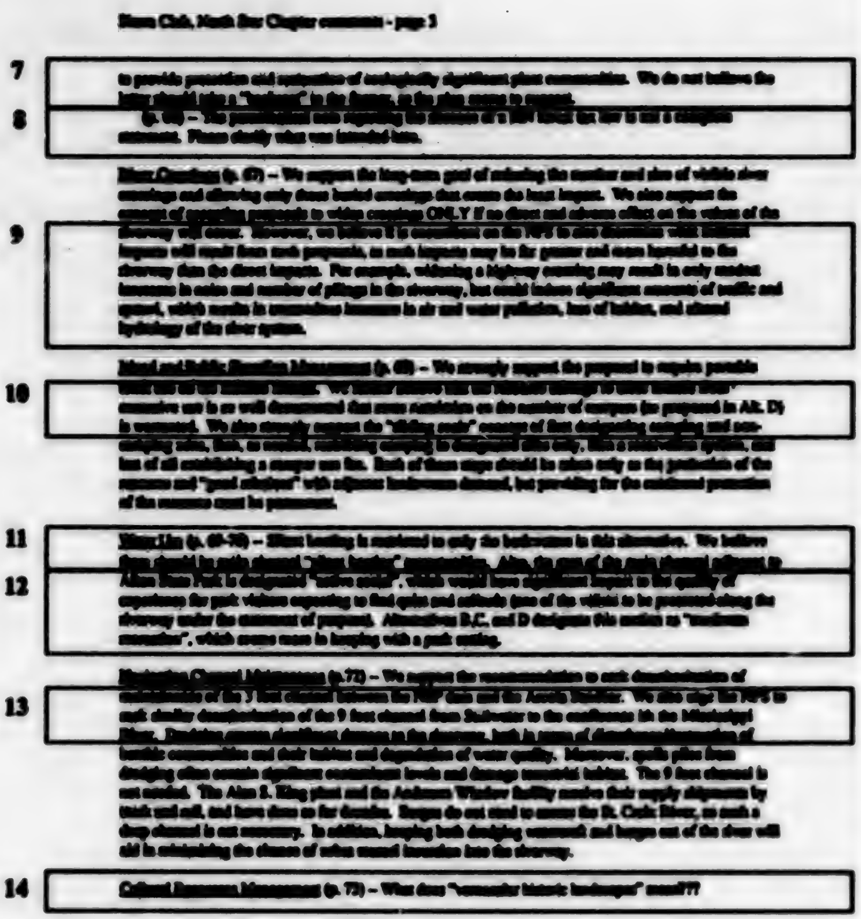
3. There are only two industrial uses within the riverway and both are expected to remain throughout the 20-year life of this plan. The text has been changed to encourage conversion to park if an industrial site is ever abandoned.

4. Cluster development is encouraged in existing state land use rules and will be considered in state rulemaking processes that will follow completion of this plan.

5. Since the riverway boundary in Stillwater is the railroad tracks, there is actually very little land within the city that is within the riverway boundary, and most of that is city parkland.

6. The "park" classification has been eliminated and the state parks will be managed as "conservation" lands, similar to the recommendation that they be classified as "natural."

COMMENTS



Sierra Club, North Star Chapter comments - page 3

7 to provide protection and restoration of ecologically significant plant communities. We do not believe the latter should take a "backseat" to the former, as the plan seems to suggest.

8 (p. 66) – The parenthetical note regarding the [illegible] is not a complete statement. Please clarify what was intended here.

River Crossings (p. 67) – We support the long-term goal of reducing the number and size of visible river crossings and allowing only those buried crossings that create the least impact. We also support the concept of accepting proposals to widen crossings ONLY if no direct and adverse effect on the values of the

9 riverway will occur. However, we believe it is incumbent on the NPS to also determine what indirect impacts will result from such proposals, as such impacts may be far greater and more harmful to the riverway than the direct impacts. For example, widening a highway crossing may result in only modest increases in noise and number of pilings in the riverway, but could induce significant amounts of traffic and sprawl, which results in tremendous increases in air and water pollution, loss of habitat, and altered hydrology of the river system.

Island and Public Shoreline Management (p. 68) – We strongly support the proposal to acquire possible

10 [illegible] excessive use is so well documented that some restrictions on the number of campers (as proposed in Alt. D) is warranted. We also strongly support the "sliding scale" concept of first designating camping and non-camping sites, then, as needed, restricting camping to designated sites only, then a reservation system, and last of all establishing a camper use fee. Each of these steps should be taken only as the protection of the resource and "good relations" with adjacent landowners demand, but providing for the continued protection of the resource must be paramount.

11 Water Use (p. 69-70) – Silent boating is restricted to only the backwaters in this alternative. We believe there should be main channel "silent boating" opportunities. Also, the part of the main channel adjacent to

12 Afton State Park is designated "active social", which would have significant impact to the quality of experience for park visitors expecting to find quiet and solitude (one of the values to be protected along the riverway under the statement of purpose). Alternatives B, C, and D designate this section as "moderate recreation", which seems more in keeping with a park setting.

Navigation Channel Maintenance (p.72) – We support the recommendation to seek deauthorization of

13 maintenance of the 3 foot channel between the NSP dam and the Arcola Sandbar. We also urge the NPS to seek similar deauthorization of the 9 foot channel from Stillwater to the confluence with the Mississippi River. Dredging causes significant damage to the riverway, both in terms of [illegible] of benthic communities and their habitat and degradation of water quality. Moreover, spoils piles from dredging often contain significant contaminant levels and damage terrestrial habitat. The 9 foot channel is not needed. The Allen S. King plant and the Andersen Window facility receive their supply shipments by truck and rail, and have done so for decades. Barges do not need to access the St. Croix River, so such a deep channel is not necessary. In addition, keeping both dredging equipment and barges out of the river will aid in minimizing the chance of exotic mussel invasion into the riverway.

14 Cultural Resources Management (p. 73) – What does "vernacular historic landscapes" mean???

RESPONSES

7. Since protection of scenic values is one of the outstandingly remarkable values for which the riverway was designated and protection of ecologically significant vegetation is not, screening of structures does take precedence over protection of ecologically significant vegetation. In most cases, both values can be protected together and management for ecologically significant vegetative communities is an improved resource management objective over the 1976 plan.

8. The statement has been corrected.

9. Under the preferred alternative, there would be no net increase in the number of transportation corridors. Increases in traffic associated with wider bridges would be evaluated (under the provisions of section 7(a) of the National Wild and Scenic Rivers Act) on a case-by-case basis for potential impacts on water and air quality, habitat, and hydrology in the riverway and necessary mitigation would be required.

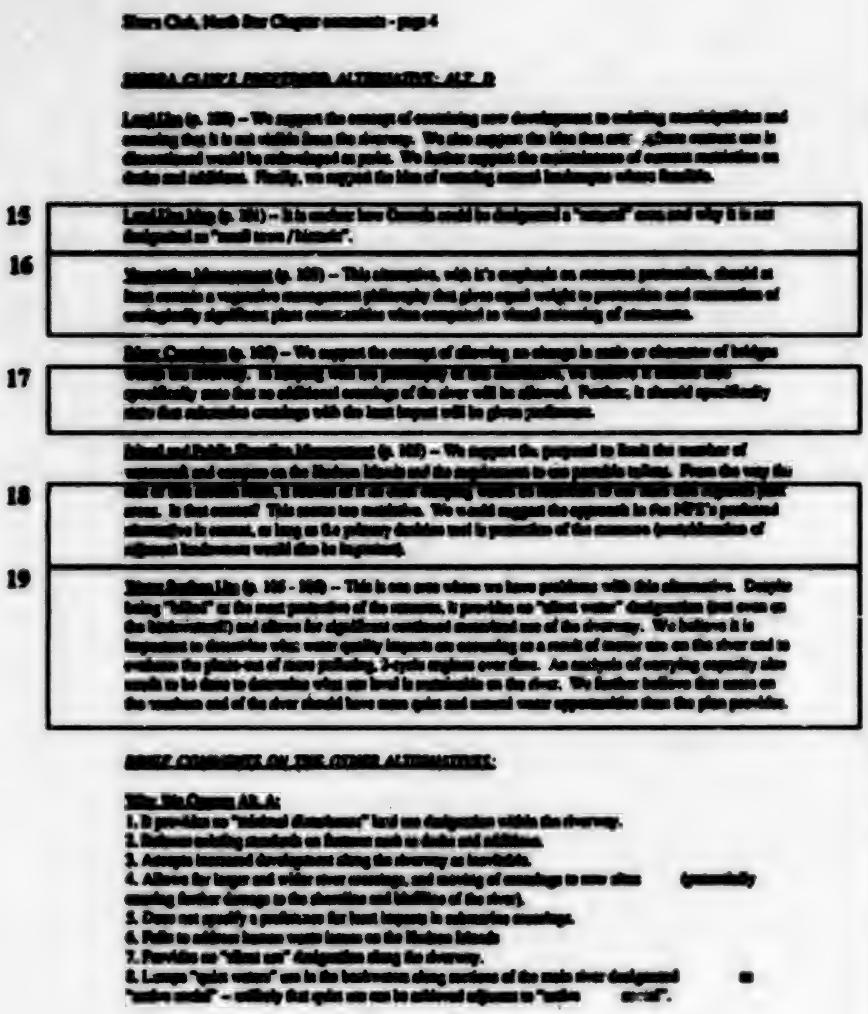
10. Comment noted.

11. The plan has been revised to eliminate the "silent boating" water management area. The original goal of that water management area was to provide an area where users would be completely free of the sounds of internal combustion engines. With motorboats operating in the main channel (in the "quiet waters" management area) and with the large numbers of riparian residential properties, the original goal of the "silent boating" water management area could not be achieved. The backwaters that had been proposed as "silent boating" will be managed as "natural waters" with a no-wake speed requirement. The adjacent main channel will be managed as "quiet waters" with a modified slow-speed requirement. See also the response to the Riverway Consensus Standards Foundation comment 26.

12. While quiet and solitude are to be protected in the riverway, the plan does not propose to protect them everywhere and there is no proposal to protect those values along the river's shore in Afton State Park, where boat speeds have not been restricted in the past.

13. This plan does not propose elimination of commercial navigation or deep-draft recreational boating. The proposal to reduce the maintained channel width at the mouth of the Kinnickinnic River should eliminate the need for future channel maintenance dredging.

COMMENTS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16
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19

RESPONSES

14. A "vernacular historic landscape" is one that evolved through use by the people whose activities or occupancy shaped it. Through social or cultural attitudes or an individual, family or community, the landscape reflects the physical, biological, and cultural character of everyday lives. Function plays a significant role in vernacular landscapes. This can be a farm complex or a district of historic farmsteads along a river valley. Examples include rural historic districts and agricultural landscapes. Additional information can be found in the *Secretary of the Interior Standards for the Treatment of Historic Properties, With Guidelines for the Treatment of Cultural Landscapes*, National Park Service, 1996.

15. The concept in alternative D was that the bluffs in the city would be designated "natural" and the rest of the community "small town." The preferred alternative does, as recommended, designate the entire community "small town historic."

16. See the response to comment 7 above.

17. Comment noted.

18. As noted on page 105, camping north of Stillwater would be limited to a few designated sites. South of Stillwater public camping is currently allowed only at the Hudson Islands and the state parks.

19. Comment noted.

COMMENTS	RESPONSES

Sierra Club, North Star Chapter comments - page 5

Why We Oppose Alt. B/C:

1. It provides no "minimal disturbance" land use designation within the riverway.
2. Osceola is not designated a "small [illegible]" area.
3. Weaker approach to controlling user impacts to riverway
4. Alt. B provides for "...an increase in recreational use (particularly fast motorized uses)" along most of the riverway, which will have serious implications for both water quality and shoreline erosion, as well as limiting the ability of the NPS to meet a primary purpose of the riverway: "Provide an environment that allows for opportunities for peace and solitude".
5. No "slow wake" designations are present within the riverway

Note: There appear to be two errors on the land use map: It appears the "rivertown" and "small town" designations around and north of Stillwater are mixed up and there is no designation identified for the area immediately north of Osceola.

Why We Oppose Alt. E:

1. Containment of development not strong enough.
2. Allows widening of crossings.
3. Does not state preference for least impact in [illegible] crossings.
4. Doesn't address human waste issue on Hudson Islands.
5. Doesn't address mounting resource damage and landowner conflicts caused by essentially unrestricted camping.
6. Provides no real controls on boat speeds or numbers, so providing opportunities for quiet and efforts to protect water quality are likely to fail.

CONCLUSION:

The St. Croix River is a priceless resource for the people of Minnesota and Wisconsin, as well as the nation. The priority of the National Park Service must be the protection of this resource, and all that makes it unique, for current and future generations. The onslaught of urban and suburban sprawl development and the increasing recreational use pressures on the river threaten to swamp all efforts of the NPS to protect this priceless resource. We urge the NPS to adopt Alternative D, with the modifications suggested above, as the only realistic approach to protecting the ecological integrity of the Lower St. Croix River while providing a variety of recreational opportunities along the riverway.

Thank you again for the opportunity to submit our comments and concerns. Please contact our office at [illegible] if you have any questions or require clarification of any comments in this letter.

Sincerely,

Ginny Yingling
State Director

COMMENTS	RESPONSES

L-39

11/22/99

Randall R. Thoreson
Lower Riverway Planning Coordinator
117 Main Street
Stillwater, MN 55082

Dear Randy,

As part of the public comment period for the future draft of the comprehensive
management plan for the St. Croix Riverway, please consider the following
speed limit recommendation. Per committee work and consensus agreement,
six St. Croix-based, marine managers have put forth this recommendation based
on their considerable, collective historical experience as well as what we feel is
necessary for the future recreational use of our natural resource. We feel
1 strongly that a top speed limit should be set at 50 miles per hour, river-wide, save
the obvious "no wake" zones. With equal resolve, we would also like to
recommend a "night" speed limit of 30 miles per hour. These limits would be in
effect for all navigable times, on the St. Croix River.

We feel that this recommendation would not diminish any type of recreational opportunity as historically witnessed, yet would serve as a curtailment of sorts, for those who perceive our current and future status as "anything goes." We have also given much thought to the exclusive boat traffic patterns of the St. Croix, as opposed to inland lakes. We cite the northbound, southbound predominance as the reason for our river traffic to move along at a somewhat, more brisk, pace than limits which have been set on inland lakes. Keep in mind that a fully trimmed, planing vessel, emits a smaller wake than a slower moving vessel, plowing water. Also, we have been encouraged by the recent, vigorous enforcement of the current noise ordinance / decibel level. We see this, as most positive but requires continued effort to enforce the existing standards.

Regarding further river regulation; let's keep in mind that peak river regulation is required only at peak usage times. These times occur between Memorial and Labor Day weekends, perhaps ten times per year.

2 In addition, we marine managers feel it is imperative that in tandem with any new forms of regulation should commence a serious, program of education. Certainly this program should deal with any new regulations, but not limited to, along with the often, overlooked issue of personal responsibility. The Department of Natural Resources and jurisdictional law enforcement agencies should spearhead this

1. From the north city limits of Stillwater south to Prescott, the plan proposes a daytime speed limit of 40 mph and a night-time limit of 20 mph.

2. Enhanced public education is an important component of riverway management and the plan has been amended to identify this need. In addition, increased public education is needed when implementing amended water surface use regulations.

387

COMMENTS	RESPONSES
program. The St. Croix River marina manager's stand at the ready to cascade this commenced effort via our combined mailing lists of some 2,000 river based boaters. Thank you for your consideration of our combined recommendation. Sincerely, Jon E. Hargen St. Croix Marina Marshall Hendin Bayport Marina Joe Riley Windmill Marina Todd Butterfield Sunnyside Marina Rod Wolf Wolf Marina Ron Shelton River Park, Beach House and Boomsite Marina	

L-81

St. Croix River Association
Box 1032, Hudson, WI 54016

November 29, 1999

Randy Thoreson
Planning Coordinator
Lower St. Croix Planning
117 Main Street
Stillwater, MN 55082

Dear Mr. Thoreson,

On behalf of the more than 330 members of the St. Croix River Association, I am submitting the following comments in response to the Draft Cooperative Management Plan and Environmental Impact Statement for the Lower St. Croix National Scenic Riverway. The Association, which was established in 1911, exists to: "preserve and develop the natural beauty of the St. Croix River and Valley; prevent pollution of its water, land and air; maintain the area as a scenic and recreational area; and to preserve its natural scenic and recreational amenities so as to secure present and future generations the benefits of this relatively unspoiled natural resource."

These comments were developed at an open meeting of the Association's Board of Directors on November 13, 1999, with the participation of Association members in attendance.

The Association strongly supports the extensive public process through which the Draft Cooperative Management Plan was developed. The Association was represented on the Lower St. Croix Task Force. That group met for more than three years to discuss numerous aspects of future Riverway management, work through key issues, and make recommendations for a preferred alternative to the National Park Service and Minnesota and Wisconsin Departments of Natural Resources.

Overall, we support the preferred alternative outlined in the Draft Management, but recommend some changes of details. We consider these changes a fine-tuning of specifics, and believe the changes will be consistent with the intent of the alternative: to accommodate growing and diverse Riverway uses while placing greater emphasis on enhancement of natural resources and the unique character of Riverway communities.

1 1. Regarding the boat speed limit for the "Active Social Recreation and Moderate Recreation" designation. We urge establishment of one speed limit of no more than 30 miles per hour for the Arcola Bar/Stillwater to Prescott stretch of the river.

1. See the response to St. Croix River Marina Managers comment 1.

COMMENTS	RESPONSES
2 2. Regarding the Water Management Classification for Afton/Catfish Bar to Prescott, we strongly believe that this stretch of river should be classified "Moderate Recreation", rather than "Active Social Recreation." Classification as "Moderate Recreation" was supported by 3 of the 4 groups participating in the Alternative Workshop. This stretch of river is used by a large number of people. We think it important to provide diverse motor-boating experiences here. We also believe that water-skiing should be allowed in this section of river. "Moderate Recreation", with a speed limit of no more than 30 miles per hour, would result in a different/diverse boating environment than would "Active Social". This change of classification would also be more consistent with the adjacent land use classification.	2. The river segment between the north limits of Stillwater and the confluence with the Mississippi River at Prescott is classified as "active social recreation" in this plan, including the river segment described in this comment. As the comment notes, this reach of river is heavily used and provides diverse motorboat experiences, including waterskiing. The area will be managed with a daytime speed limit of 40 mph and a night-time limit of 20 mph. The "moderate recreation" classification is applied between the Arcola Sandbar and the north limits of Stillwater, with a 24-hour speed limit of 20 mph. Most waterskiing occurs between 25 mph and 36 mph; a 30-mph speed limit would prevent a significant amount of waterskiing activity.
3 3. With regard to Management Structure/Policy Development for the Riverway (p. 119), we believe it imperative for the state Departments of Natural Resources to continue to have oversight over local decisions. The nature of local politics will make it difficult to achieve uniformity in enforcement of Riverway policies and ordinances, and consistency will be critical to successful implementation of this plan. In addition, we believe it essential to have a means of recourse should a local government disregard policies and ordinances. The Wisconsin and Minnesota Departments of Natural Resources should retain their veto power. We support the creation of a Lower St. Croix Partnership Team to advise the Lower St. Croix Management Commission. Such a group will help carry into the future the dialogue with local governments and other stakeholder groups that has been established through the planning Task Force.	3. See the response to Minnesota-Wisconsin Boundary Area Commission comment 5.
4 4. Regarding the Analysis of Impacts on Scenic Resources (p. 194): The analysis states that no significant land acquisition would occur in implementing the preferred alternative. We believe that this statement reflects the intent that public land management agencies will not make significant land acquisitions. However, the statement does not reflect the opportunities that may exist to protect land through other means. We urge that this section be amended to encourage permanent protection of land along both sides of the river through any means, including scenic and conservation easements, which may be held by land trusts and others.	4. This is an important component of the preferred alternative as described on page 74 of the draft plan.
5 5. With regard to High Water/No Wake determinations. We believe that the no wake restriction should be put in place when the river level is 681 feet. There is widespread recognition that there are problems when advisories are issued at the 683-foot water level. We say, resolve the problem now—don't wait to fix it!	5. See the response to Minnesota-Wisconsin Boundary Area Commission comment 6.
6 6. With regard to personal watercraft, the St. Croix River Association urges a ban on such craft in both the state and federally administered portions of the Lower St. Croix. At its 86th Annual Fall meeting (1998), our organization passed a resolution supporting a ban. The resolution was previously submitted to the Superintendent of the St. Croix National Scenic Riverway and the Lower St. Croix Management Commission.	6. Personal watercraft is prohibited in the area north of the north city limits of Stillwater. The plan states that they continue to be permitted south of that point, subject to other provisions of state law in each state.
7. Regarding structure color requirements for the "Small Town" classification (p. 284),	

COMMENTS	RESPONSES
7 we believe that earth tones should be required in small towns, rather than leaving this to be determined by local ordinance.	7. The plan has been amended to reflect this recommended change.
Again, we want to compliment the managing agencies for their commitment to the public process used to develop the draft plan and preferred alternative. The educational forums, meetings, workshops and open houses provided extensive opportunity for many stakeholders to be heard and considered at all stages of the plan's development. The Association has welcomed the opportunity to address current issues and reaffirm our commitment to the St. Croix National Scenic Riverway. In finalizing this plan, we urge the agencies to set policies that will maintain the integrity of the Riverway and remain true to the purposes for which it was designated. Sincerely, David Wald President	

COMMENTS

E-53

1 Author: [illegible] at NP--INTERNET
Date: 11/29/1999 8:17 PM
Normal

TO: Randy Thoresen at NP--MWR
Subject: Waterways Association Response to the Management Plan
------------------------------------ Message Contents

Randy,

I have attached a Word 97 file "Plan Response.RTF". It is the Waterways' response to the Management Plan. In case you cannot open it I have pasted the text below. The Word file is easier to read.

Mark Smith
President, St. Croix Waterways Association

In response to:

Recommendation to reduce channel maintenance from 200 ft to 100 ft. at the Kinnickinnic Narrows.
The Kinnickinnic is a very popular area. On weekends this area becomes very congested with fishermen, campers, swimmers, and boat traffic. Reducing the channel down to 100 ft. would not be safe for a number of reasons. The boat traffic traveling north and south must often alter course to move around fishermen. There are also boats turning off from and into the channel from the beaches along the narrows. Also in a no-wake area different size boats will travel at different speeds which often makes it necessary to move over or around another boat traveling in the same direction. What you are proposing would be like taking a multi-lane highway and reducing it down to a one lane. It could become a dangerous situation.

De-authorization of the 3 ft channel between the NSP dam and the Arcola sandbar.
2 Boats cannot navigate the main channel area safely if the Corp of Engineers does not continue to remove snags, and dredge when necessary to maintain at least a 3 ft. channel.

Restrictions on landscaping.
You are unreasonably restricting private riparian owners' ability to manage vegetation on their property. People that have property on the river have the right to see the river. Requiring that 60% of a
3 persons' property be covered with trees is unreasonable. As long as the outline of a home is softened by vegetation it should meet the requirement of being visibly inconspicuous.

Camouflage type of colors for structures.
4 A camouflaged color is not camouflage 12 months out of the year in the Midwest.
This is a major metropolitan recreational area used by many, yet you make the property owner bear the responsibility of keeping this a scenic river. It is unjust to require landowners to keep their homes inconspicuous when the river is filled with a cornucopia of color for most of the year due to people, boats, tents, etc. Will everyone that uses the river be required to wear camouflage or have their sails and boats painted with camouflaged color? A white color would blend nicely in the winter, and a red or yellow house would blend nicely in the fall.

RESPONSES

1. See the response to Lake St. Croix Beach comment 13.

2. The 3-foot channel was authorized for commercial navigation, but no commercial navigation requiring a need for that channel exists any longer, and the authorization is no longer needed. Snagging and dredging has not occurred at or north of the Arcola Sandbar since at least the 1960s and probably not since 1915. As discussed on page 72 of the draft plan, shallow conditions at the Arcola Sandbar and occasional shallow conditions north of that point are consistent with maintaining the diversity of recreational experiences and for protecting opportunities for quiet and solitude on that portion of the riverway.

3. Maintaining views of the river from residences and maintaining visual screening of structures as viewed from the river are matters being considered in state rulemaking that will occur subsequent to completion of this plan. This is a level of detail not addressed in the plan.

4. Scenic quality is one of the outstandingly remarkable values for which the riverway was designated, and protecting scenic quality is a fundamentally important element of this plan.

COMMENTS

Dock restrictions

5 Due to the natural conditions on the St Croix River eight foot widths are not always adequate for safe mooring of boats. Also keeping docks limited to 4 ft depths is not possible for all watercraft. Some craft have a draft of 4 feet or more. Another problem with this proposal is the fluctuation of the water level. Requiring dock owners to adjust the position of their docks to meet this requirement could be financially taxing or even physically impossible for some.

6 30% visibility rule
As seen from where?

7 Height restrictions
If a home is inconspicuous from the river, size restrictions serve no useful purpose. They only limit the rights of homeowners.

No construction on slopes over 12%
We have heard testimony from civil engineers at task force meetings that homes can be built on slopes greater than 12 % without posing a danger to the river. We have also seen in river towns many homes built on
8 slopes greater than 12 % without any problem. What is the justification for 12%?

Campsites
Camping on the river is very popular and finding areas to enjoy this recreation is limited. By closing or restricting camping in certain areas you will be forcing campers to move to other areas. This will result in over use and crowding at other campsites along the river. Damage or changes to islands and shorelines are not always the results
9 of human interchange. Nothing remains static. Find different methods, other than loss of camping opportunities to manage any alleged problems. The idea is to let people out on the river to enjoy this area.

Restricted areas for motor boats
10 The natural conditions of back channels already restrict boat access, noise and speed. There is no need for additional regulations.

Speed restriction
11 The St Croix river is rarely used to its capacity. Restrictions on speed are not necessary. laws are already in place to protect people and property from unsafe operation. If a boater fails to control or operate their vessel in a safe manner the individual is responsible for any consequences. A more coordinated effort by the law enforcement agencies on both sides of the river would also help with any infractions. More laws on top of ones that are already not enforced just creates more bureaucracy.

Water-skiing
12 We are against any further restrictive regulations that concern water-skiing north of Stillwater.
The draft plan is very vague as to what is being proposed.

Boat densities
13 This is not applicable to the St Croix River. The guideline was developed for lake use with water-skiing , fishing and boats going in every direction. The St Croix River is used differently, most boats travel north and south , this allow for a higher boat density.

Government regulatory organization
14 We already have federal, state, county and local municipalities regulating the river. We do not need a duplication of this by the Lower

RESPONSES

5. Language has been changed in Appendix B to respond to the concern about adequate dock length and to eliminate the implication that docks cannot extend beyond four feet. The dock width issue will be addressed in state rulemaking.

6. A "30% visibility rule" is not proposed in this plan.

7. Tall structures are likely to impact scenic quality to a greater degree than smaller structures. See the response to comment 4, above.

8. When the original plan was developed in the 1970s, the Soil Conservation Service of the U.S. Department of Agriculture, the nation's primary expert on soil stability, strongly recommended using the 12% slope figure to guard against increased erosion. In developing this plan, the Natural Resource Conservation Service (the SCS's successor agency) reported that data collected in the last 20 years showed even stronger evidence that the slope standard should remain at 12%.

9. While restrictions on camping need to be limited to accommodate public interest in that activity, camping activity cannot be permitted to destroy the very resources the agencies are charged to protect and the campers are there to enjoy.

10. Technological advances have made it possible to operate at high speeds in very narrow and shallow areas. The plan proposes continuing the existing no-wake rule in back channels.

11. The plan proposes a 40 mph speed limit south of the north limits of Stillwater during daylight hours, and a 20 mph speed limit at night. Safety is a relevant issue with respect to extremely high speeds in daylight hours, but safety is only a small part of the justification for speed limits on the riverway. The riverway was designated for its scenic and recreational characteristics, and there is ample justification to slow traffic to enhance visitor enjoyment. It is analogous to the difference in speed limit on an interstate highway versus a scenic road.

12. The plan has been revised to propose prohibiting waterskiing north of Stillwater and to establish a 24-hour speed limit of 20 mph between the north limits of Stillwater and the Arcola Sandbar. The river there is very narrow and lends itself to more passive activities. Waterskiing is proposed to continue to be allowed south of the north limits of Stillwater.

COMMENTS

St Croix Partnership team.

PWC's will be banned north of Stillwater.

15 North of the Boomsite to the Zebra Mussel station the river is currently used by all types & sizes of watercraft, at a variety of speeds and volume density. To eliminate one type (PWC) is unfair & unnecessary. No damage to the river has been proven to be exclusively caused by PWC and no other specific type of recreational watercraft has been banned. Therefore the ban should be eliminated.

RESPONSES

13. Density standards used on other water bodies were modified to recognize the unique circumstances found on the St. Croix River.

14. The partnership team would have no regulatory authority. It would review local government land use decisions for consistency and provide comments to the Lower St. Croix Management Commission.

15. A prohibition on personal watercraft north of the north limits of Stillwater is an action taken by the National Park Service consistent with management of personal watercraft throughout the National Park System. The action was taken independent of this plan.

COMMENTS

L-95

STEAMBOAT INN
Lake Street North/U.S. 10 Bridge
Prescott, Wisconsin 54021
[illegible]: www.[illegible].com

STEAMBOAT INN

Metro 651-[illegible]
Local 715-[illegible]
MN & WI [illegible]
e-mail: [illegible]

Bluffline Setback: It seems to me that there is ambiguity about the location of the bluffline in rivertowns. Based on what visually seems to be the case, every structure located in the Scenic Riverway in the communities of Prescott, Afton, Hudson and Stillwater lies below the bluffline, i.e. between the bluffline and the river. It seems that the bluffline setback was not applied in permitting the construction of the Grandview Professional Building in Hudson, the Dock Café in Stillwater, or the entire marina/Clyde's Restaurant/townhome development in Bayport. All these buildings, which were constructed in the riverway subsequent to the adoption of the Scenic Riverway ordinance, are located between the bluffline and the river. I believe that the bluffline setback as it is applied in
1 rivertowns is a meaningless concept. In appendix A the bluffline setback language should be changed to exclude its application in rivertowns.

I agree that the application of the 50% rule as a means of eliminating structures in floodways and floodplains is reasonable social policy. Each time the area is flooded there is a cost to the community.

However, I believe Scenic Riverway regulations, which reclassify existing properties in rivertowns as dimensionally substandard and thereby non-conforming structures/uses, is unwise social policy. When Scenic Riverway regulations reclassify property, which is located above the floodplain, as non-conforming, the application of the 50% rule is unavoidable. The intent of the 50% rule is the elimination of non-conforming structure/uses. In floodplains this is enlightened policy. In rural, natural, minimally disturbed areas the elimination of dimensionally sub-standard/nonconforming structures maybe appropriate. However in developed communities, such as rivertowns, the intent of the amortization policy results in neglect, decreasing property values and eventual elimination of homes and businesses. In the case of the Steamboat Inn the 50% rule will eliminate a business that is a significant contributor to the community. Depending on the seasons the Steamboat Inn employs 40 to 90 employees. It attracts visitors to Prescott. These visitors support other businesses. The Steamboat Inn pays significant property, payroll, sales and income taxes.

2 When Scenic Riverway regulations designate urban properties as non-conforming, despite being located above the floodplain/floodway, the effect is deleterious to those communities.

1,C:\[illegible].doc, 11/30/99,10:01 AM

COME BY CAR OR BOAT TO WHERE THE GREAT RIVERS MEET!

RESPONSES

1. There are portions of Prescott, Afton, and Hudson that have blufflines within the riverway boundary. Steep slopes deserve protection regardless of whether or not they lie within municipal boundaries.

2. Comment noted.

COMMENTS

3 River Setback: I propose the 100-foot horizontal setback from the normal high water mark be changed as it applied to rivertowns. Providing that 1) the structure is not located in the floodplain/floodway, and 2) the slope of the development directs run-off into city storm sewers, the 100-foot setback for existing structures should be eliminated. Rather I propose that in rivertown zoning districts the river setback will be determined by the community's underlying zoning ordinance.

Wisconsin regulations should distinguish between non-conforming structures (uses) and dimensionally sub standard lots. Non-conforming structures/uses are structures/uses inconsistent with zoning. Dimensionally sub-standard properties don't satisfy zoning dimensional regulations, such as setbacks. In Wisconsin if subsequent zoning changes are made, a property that was built in conformance with existing dimensional zoning regulations, will become dimensional sub-

4 standard and in Wisconsin a non-conforming structure/use. Wisconsin law needs to differentiate between dimensionally sub-standard properties and non-conforming structures/uses.

Best Regards,

Bruce Swanson

Bruce Swanson
Owner

[illegible], 11/30/99,10:01 AM

RESPONSES

3. Considering the need to protect the values of a national scenic riverway, a 100-foot setback from the water's edge is certainly appropriate.

4. See response to St. Croix County comment 3.

Mr. Thoreson:

As Chair of the Stillwater Heritage Preservation Commission (the "HPC"), I offer the following comments on behalf of the HPC and request that these comments be entered into the record for the draft EIS Cooperative Management Plan (the "Plan").

Let me begin by saying that the HPC is pleased to see such a detailed and comprehensive Plan; clearly, much hard work and thought went into the draft that has been circulated for review and comment. For our comments to be of assistance in reaching a final plan, I will limit our points to those of immediate concern to the HPC.

Broadly speaking, the Plan pays lip service to protecting the cultural and historic attributes of the Lower St. Croix River. As you might expect, the HPC applauds this appreciation of the fact that the Lower St. Croix is more than merely wild and scenic; that in fact there are rich cultural and historical elements that must be preserved. Unfortunately, there seems to be a blind spot when applying this appreciation to the Stillwater/Houlton Bridge.

For example, the section of the Preferred Alternative that speaks to River
Crossings does a good job of laying out the constraints of working within existing
1 river crossing corridors. Why doesn't your analysis extend to the
Stillwater/Houlton Bridge? Clearly, the Park Service's unwavering desire to
remove this bridge is inconsistent with its own analysis. Perhaps to address this
inconsistency, this section of the Plan states the Park Service's point of view that
there shall be "no increases in the number of road or railroad bridges" (pg. 67).
This is stated as though non-proliferation is legally mandated by the Act, which of
course it is not. In fact, there is no restriction on new or replacement bridges in
2 The Act. Non-proliferation may, in many instances, be a laudable goal, but not
at all times and not at the expense of significant cultural and/or historical
resources. Back door rulemaking to apparently further someone's political
agenda is most undignified.

Similarly, the section of the Preferred Alternative that addresses Cultural Resources Management pays lip service to protecting the cultural resources of the river and yet the Stillwater/Houlton Bridge is not only ignored, but to be removed at all costs if a new bridge is built. This glaring inconsistency, like the one addressed above undermines both the very good work that went into the Plan and the overall credibility of the Park Service.

Let me end, as I began, on a positive note. Many competing interests have legitimate points of view as regards the future development of the Lower St.

1. As noted on page 18 of the draft plan, the Stillwater-Houlton bridge issue is being addressed in a separate environmental impact process.

2. Comment noted.

397

COMMENTS	RESPONSES
Croix River. No one position is wholly correct. By and large, the Plan does an admirable job of addressing some very contentious issues, especially land use. The HPC wholeheartedly endorses the point of view that development be allowed in "river town management areas ... provided it (is) consistent with the historic character of the communities." Surely, preservation of the Stillwater/Houlton Bridge is consistent with your position in this regard. Thank you. Howard Lieberman, Chair, Stillwater Heritage Preservation Commission (651) 430-8136	

L-57

UPPER MISSISSIPPI WATERWAY ASSOCIATION
INCORPORATED [illegible]
P.O. Box [illegible]
St. Paul, Minnesota [illegible]
[illegible]
[illegible] FAX
Dedicated to navigation and sound water resource management.

November 24, 1999

Lower Riverway Planning Coordinator
117 Main Street, South
Stillwater, MN 55082

Sir/Madam:

The Upper Mississippi Waterway Association offers the following comments on the "*Draft Cooperative Management Plan, Environmental Impact Statement, Lower St. Croix National Scenic Riverway, Minnesota and Wisconsin*".

Our comments are confined to the Preferred Alternative.

Three-foot Navigation Channel Maintenance (Page 72). The narrative states that prevailing shallow water levels at the Arcola Sandbar effectively limit the majority of motorboat use to that portion of the river south of the sandbar. Above the sandbar, use is a mix of canoes and motorboats, with predominantly canoe use north of Cedar Bend. These conditions would likely change if water levels change at the sandbar.

The Plan further states that to ensure opportunities for a diversity of recreational experiences continue to be provided on the Lower St. Croix, it is important that the Corps of Engineers does not resume channel maintenance north of the Arcola Sandbar. Thus, under the preferred alternative, the managing agencies would recommend that Congress deauthorize the 3-foot navigation channel between the NSP dam at St. Croix Falls/Taylor Falls and the Arcola Sandbar.

1 While this issue does not directly impact commercial navigation, the wording casts the agencies as a champion of diverse recreational experiences, when, in fact, they propose to restrict it. If the intent of this measure is to make a portion of the river available only to canoes, so be it, but misleading language should not be used to pass a restriction off as a diverse experience.

Nine-Foot Navigation Channel Maintenance (Page 72).

Channel width. This portion of the Plan states that in 1997, the Corps of Engineers indicated that of the three historic dredge points on the St. Croix (Hudson, Catfish Bar and Kinnickinnic Narrows), only the latter is expected to require dredging over the next 40 years. Given this, under the preferred alternative, managing agencies would support continued maintenance of the navigation channel, but would recommend that the Corps reduce the maintained channel width from 200 feet to 100 feet at the Kinnickinnic Narrows.

In discussions, the Corps indicated that they do not automatically maintain channel width to the authorized 200-foot limit in areas where use-patterns indicate a narrower channel is appropriate and adequate. Thus, it is my understanding, that the Corps does not currently maintain a 200-foot channel at the Kinnickinnic Narrows.

1. See the response to St. Croix Waterways Association comment 2.

COMMENTS

At the present time and given the current traffic levels on the St. Croix, the channel at the Kinnickinnic Narrows appears adequate. However, should the managing agencies consider changing federal legislation to permanently decrease the channel width in this area they should first have dialog with current river-dependent industries and cities. Any premature action by managing agencies would negatively impact the economic investment and future activities of business and river dependent interests. Also, if Congress revisits this issue, circumstances unforeseeable at this time may produce an outcome which is not favorable to either the managing agencies or commercial interests.

2 In our view, managing agencies should [illegible] of the navigation channel as currently authorized to facilitate the continued safe operation of commercial tows, excursion vessels and recreational boats.

3 [illegible]. It is unreasonable and discriminatory to have dredging and buoy-tending vessels subjected to zebra mussel prevention programs while excursion and recreational craft are free to come and go with impunity. If the vast majority of vessels transiting the Mississippi River are not subject to zebra mussel inspection upon entering the St. Croix, then, unless there is probable cause, perhaps no vessel should be subject to inspection.

Respectfully,

[illegible] J. [illegible]
Executive Director

RESPONSES

2. See the response to Lake St. Croix Beach comment 13.

3. It is illegal to bring a craft infested with zebra mussels into the St. Croix River; all vessels are subject to inspection on entering the St. Croix from the Mississippi River. It is important that all government vessels be inspected to ensure compliance.

L-80

WildLaw

A Non-profit Environmental Law Firm

North Woods Office

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November 29, 1999

Mr. Randy Thoreson
Lower St. Croix Planning Coordinator
117 Main Street South
Stillwater, MN 55082
randy_thoreson@nps.gov

Re: Lower St. Croix GMP/EIS

Dear Mr. Thoreson:

As a member of SWAN, a non-profit environmental group, I am filing the following comments concerning the Lower St. Croix GMP. The preferred alternative does not go far enough to protect the aesthetic and physical properties of the river.

The preferred alternative is good at generalities and a nice start but it doesn't go far enough to protect a designated Wild and Scenic River. The problem with the EIS is there are no site-specific baseline data for any of the resource areas such as sedimentation or vegetation management. The assessment of carrying capacity of the

1 river is critical and should be the basis for determining future use levels. Also, there is little discussion of the cumulative impacts. While the National Park Service acknowledges the changes occurring in housing and recreation patterns in theory, the EIS fails to document in a specific manner how the governmental entities will incorporate these increases in future mitigation measures and management activities. A relatively minor impact allowed by the NPS may be significant when seen as part of a "big picture." There is a real need for developing a regional, interstate transportation and land-use strategy to protect the riverway from the environmental harm caused by sprawl. Also, nothing in the EIS indicates the NPS recognizes that protection of the riverway must be a watershed-wide effort: -- tributaries must also be protected from pollution and degradation.

The CEQ Regulations define "Cumulative impact" as:

"the impact on the environment which results from the incremental impact of the

1. Development of a regional, interstate transportation and land use strategy is beyond the scope of this plan. The managing agencies are exploring such a strategy, however, in discussions with state transportation agencies and others.

COMMENTS

> action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

40 C.F.R. §§ 1508.7 (Emphasis added.)
The CEQ Regulations also state:

> "'Effects' include: . . . (b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."

40 C.F.R. §§ 1508.8.

The law and the public require the NPS management to identify what actions will be authorized and taken and, consequently, the results or impacts from those actions.

2 Alternative D, which emphasizes resource protection, provides more
opportunities for quiet recreation, and seeks to control growth along the riverway, is the
best of the proposed alternatives, but none of the alternatives includes "silent" use
designation for part of the water surface. The high level of pollution caused by
3 motorboats necessitates limits on the number of boats on the riverway; requirements for
4-cycle engines (which are less polluting) should also be considered. The influx of
non-native species into waterways is a real and specific threat recognized by scientists and those
4 involved in the protection of federal lands. To that end, inspections of boats coming from the
Mississippi River for zebra mussels should be specifically included in the EIS with
quantifiable targets.

The NPS has not performed site-specific surveys for or obtained current population or inventory data on all the Threatened, Endangered, or Sensitive species which may inhabit these areas. Nor are there adequate site-specific surveys and inventory data on the status and health of the aquatic species and biological communities in the streams in the project areas.

Without site-specific surveys and data, direct, indirect, and/or cumulative impacts the NPS cannot assure the public that mitigation measures will ameliorate the significant impacts allowed under the preferred alternative. Mitigation measures must be identified and prescribed for the actions allowed under the preferred alternative. The NPS needs to provide another alternative that identifies and analyzes the cumulative impacts and allows greater areas dedicated to quiet sports. Thank you for your consideration of the issues contained herein.

Sincerely,

Leigh Haynie

RESPONSES

2. Comment noted.

3. Comment noted.

4. See the response to Upper Mississippi Waterway Association comment 3.

L-86

WOLF
MARINE, INC.

314 E. Alder St. • Hwys. 95 & 96 • Stillwater, MN 55082 • 651-439-2341 Fax: 651-439-3494

Lower Riverway Planning Coordinator
117 Main St
Stillwater MN 55082
Attn: Randy Thoreson

Dear Randy,

In reference to the Draft Cooperative Management Plan, I would first of all like to address the layout of the plan. After reading through it, I found it very hard to understand and follow the overall alternatives. I found myself going from one section of the plan to a completely different section in order to grasp the overall understanding of Alternative A, for example. Too much moving from one section to another and too much information.

After reading through the Draft Plan, I decided to read through the old Master plan to see how we have met the objectives and goals set forth over 20 years ago. Please note I used the word "we". In order to obtain the objectives and goals set forth, it takes the cooperation of everyone. The Park Service, both the Minnesota & Wisconsin DNR's cannot accomplish these goals alone. It takes the landowners, boaters, and everyone who uses the river to come to an agreement on reaching the goals of the plan.

The old Master Plan for the Lower St. Croix River I read was dated February, 1976. The first thing I noticed was the major purpose of the plan which reads as follows. "The major purpose of the master plan is to balance the need for recreational use of the area against the equally important objective of preservation of the natural values of the area. Thus, the overall goal of the plan is "to preserve the existing scenic and recreational resources of the Lower St. Croix River through controlled development". The meaning of the word preserve is " to keep from harm, damage, danger, evil, to protect and save, to keep up, carry on, maintain".

How well have we preserved our scenic resources? I believe we have done a fairly good job of preservation through controlled development, but we have lost some of our scenic resources through natural occurrences such as abnormally high water during the summer months. Grass and trees don't grow when they are under water, they die. In ice flows I have watched a half a dozen trees go down the river still standing up on top of the ice flows. Summer wind storms can cause the islands to look like a bombing range with trees broke in half with the top half hanging in the tree along side of it. Is this a good place to camp? Many of the islands we used in the 1970's are gone. Were they not part of our scenic resources?

Now, I would like to address how well we have preserved our recreational resources. Part of the reason the Lower St. Croix River was designated wild & scenic was for the diverse recreational opportunities such as large motor boats, sail boats, fishing, water skiing, canoeing, and swimming. Each of these activities could be performed on different segments of the river with little overlap into the other segments of activity. Slowly, we have been squeezing all of these activities into smaller and smaller portions of the river. Out of the original 52 miles of river that was accessible for motor boats is now only about 31 miles. Not only have we lost 21 miles of waterway for the boaters, we have also lost numerous spots at which to stop. Cramping the boaters and campers into 31 miles causes competition and sometimes overcrowding. To make matters worse, many of the back channels on the remaining 31 miles of use consist of log jams and blow downs which forces more people into the main channel. We used to be able to get away from the main channel traffic, but now even the canoeists cannot get through the back channels. This also forces an intermix of activities such as boaters and canoeists competing for the same spot of water. The canoeists would rather be in a back channel than in amongst the boaters, but these channels are no longer accessible.

How can we enjoy our scenic resources when we are unable to get to them? It seems to me as we try to resolve a problem in one area it forces even more activity into another. The problems are not being resolved, they're just being moved from here to there. Does the new Draft Cooperative Management Plan address this? Not that I could find. After reading the 1976 Master Plan, I feel our goals and objectives are still the same as they were then. Some of the goals have been achieved, others have not even been

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COMMENTS

addressed. I don't believe we need a new plan. We need a different approach to achieve the goals set previously out. I feel we have managed our river to death.

If you look back at the meaning of "preserve" you'll see the word "maintain". You cannot preserve without maintenance. Maintenance means to keep in good repair. Management will not keep the high water from washing the islands away or trees from dying, but maintenance can repair the damage done by high water and replace dead trees. Maintenance can also open up the back channels so that small boats can get out of the main channel and not be forced to compete with larger boats. Maintenance can clean up and remove litter [illegible] and "widow makers" which are parts of trees hanging in other trees that can fall without warning so that you can pull up on a beach without the fear of dead trees falling on you causing injury or death. The snags along the beaches could also be cleaned up so that you could swim without getting caught in branches underwater. I'm not saying that every piece of dead wood must go, but too much of a good thing sometimes becomes a hazard. We reached this point on the river a couple of years ago. I feel we need more of a "hands on" approach and that our management policy is missing a maintenance policy.

1 I feel that the management plan for the river is fine, it's not broke, don't fix it, but we should add a maintenance plan to keep the river in good repair and improve it with plantings, erosion control (riprap on the south ends of islands) and other such programs. The federally controlled portion of the river should be managed and maintained as a park with wild species, designated camp sites and sanitation facilities. As far as I can see, the speed limits of 20 mph daytime and 20 mph night seem fair, but might be a nightmare to enforce.

The one most important item missing from the Draft Plan is a maintenance plan so that in the future we can say "yes, we managed our river, but the islands, and recreational camp sites are still here because we also maintained our river".

Thank you for permitting me to express my views.

Sincerely,
Wolf Marine, Inc.
Martin J. Wolf, Vice President

RESPONSES

1. Comment noted.

COMMENTS

November 2, 1999

COMMENTS CONCERNING: DRAFT
COOPERATIVE MANAGEMENT PLAN
ENVIRONMENTAL IMPACT STATEMENT
Lower St. Croix National Scenic Riverway,
Minnesota-Wisconsin

BY: Francis E. Ogden, President
Citizens For Responsible Zoning and Landowner Rights, Inc.
113 West Walnut Street
River Falls, Wisconsin 54022

1 1. Page 10. Under purposes, it is unreasonable to "provide an
environment that allows the opportunity for peace and solitude" in
the state riverway zone.

2. Page 11. I agree with the vision statement. The Wisconsin
Department of Natural Resources will have to change their attitude
considerably if "riverway users, land owners and managers" will be
"working together and respecting each other". If we are going to
2 have "cooperative management", at least one citizen representing
each state should be voting members of the Lower St. Croix
Management Commission.

3 3. Page 281. The general policy statement in all required local
ordinances should be based upon the opinions of the units of
government which are required to adopt ordinances. The Lower St.
Croix Management Commission should not dictate the wording of the
statement.

4 4. Page 281. The definition of "Slope Preservation Zone" should be
changed from 12% to 20%. A "primary bluffline" should be
5 established throughout the riverway district and accurately mapped
on topographic maps available to the public with a scale of 1" =
100' and a contour interval of 2'. All land within the district
6 lying more than 200' landward of the primary bluffline should be
outside of the slope preservation zone. All areas in the slope
preservation zone shall be shown on the topographic maps.

5. Page 284. Under the heading "Slope Preservation Zones", delete
7 the statement "Structures will be setback at least 40' from all
bufflines." There should not be a setback requirement from
blufflines that do not directly face the river. Accurate maps to
a scale of 1" = 100' should show graphically all bluffline
8 setbacks in the district. Accurate mapping of all setbacks by the
Lower St. Croix Management Commission is necessary.

9 6. Page 284. Substandard structures should be allowed to be expanded
if they can be made visually inconspicuous by plantings.

10 7. Page 284. Structure height in the rural residential district
should remain at the current 35'. It is unreasonable to create
hundreds of additional non-conforming structures which have been
legally built since the current regulations were enacted. 35'
11 should be the height standard for park, natural and minimally
disturbed districts for the same reason. The "uppermost point of

RESPONSES

1. Comment noted.
2. Congress directed that the National Park Service and the two states cooperatively manage the riverway and the Lower St. Croix Management Commission was created to provide a vehicle for that cooperative management. Responsibility for management decisions is limited to those three agencies. The Minnesota-Wisconsin Boundary Area Commission was invited to serve on the Lower St. Croix Management Commission as a nonvoting member to provide public perspective. The plan proposes an additional nonvoting member representing the Lower St. Croix Partnership Team to provide another public perspective.
3. The general policy statement is derived from a similar statement in appendix A of the 1976 *Master Plan*. The plan proposes a general policy statement appear in state rules.
4. See the response to St. Croix Waterways Association, comment 8.
5. The managing agencies provide technical assistance to local governments on a regular basis. However, it would not be appropriate to spend public funds to survey all lands within the riverway for the purpose of providing site plan details for private land developers.
6. Steep slopes deserve protection regardless of their location.
7. See the response to comment 6 above.
8. See the response to comment 5 above.
9. See the response to St. Croix County comment 3.
10. The plan has been changed to provide for a 35-foot structure height limit in the rural residential district.
11. Comment noted.

COMMENTS	RESPONSES
12 the structure" should be the structure itself, excluding appurtenances".	12. The "uppermost point" issue will be addressed in state rulemaking subsequent to completion of this plan.
13 8. Pages 284-285. In the small town historic and small town districts new and existing commercial and multi-family uses sh be allowed.	13. See the response to Afton comment 1.
14 9. Page 286. Minimum lot width-small town, small town historic, should be determined by underlying local zoning code. Local zoning is adequate.	14. Comment noted.
15 10. Page 287. Substandard structures. The proposal is very good. This has been a basic problem in the Wisconsin section of the riverway district. It must be made clear that existing structu can be made visually inconspicuous by the addition of vegetati between the river and the structure.	15. See the response to St. Croix County comment 3.
16 11. Pages 289-291. The speed limits are too low and showing a rang of speeds rather than a maximum limit is confusing. Noise and wake are the issues.	16. The plan has been revised to eliminate reference to a range of speeds.
17 12. There is basic problems with the Lower St. Croix Management Commission being the ultimate decision maker. They are govern employees rather than elected representatives of the citizens. They should only advise. Minnesota and Wisconsin residents of district should elect the voting members of the Lower St. Croi Management Commission.	17. See the response to comment 2 above.

Francis H. Ogden

Ogden Engineering Co.
113 West Walnut St.
River Falls, WI 54022

COMMENTS

Larry & Liz Wolf

294 165th Ave. Somerset, WI 54025 Phone: (715) 549-664

November 4, 1999

Randy Thoreson
Lower St. Croix National Scenic Riverway
117 Main St. So.
Stillwater, MN 55082

Subject: Comments on Lower St. Croix Cooperative Management Plan/Draft EIS

1 Page 5: I would like an explanation of the designation between the Federal Zone and t State Zone and if there is any priority in managing these areas by any one agency. If so, wh the responsibilities for each agency in each of the two zones?

Page 10: Under the section describing the Purposes of the Lower St. Croix National Sce Riverway, the various purposes should be matched with the various designated land managen areas and the water management areas. All the purposes do not fit all of the various managen areas along and on the river.

Page 16: Under the section dealing with the Need for Concessions Management, this appears to be in conflict with the addition of more public landings (accesses) for boaters.

2 Page 62: (Map) The Land Use and Water Use designations should be coordinated with each other to some degree. The land use on both sides of the river should be consistent whor possible. The southern boundary for the Minimally Disturbed section in Wisconsin from Osceola to the Twin Springs subdivision should not extend any further south than the St. Cro Islands Wildlife area and certainly no further south than the old railroad stone piers below th railroad high bridge. From that point south to North Hudson should all be designated rural residential. At the old stone piers there are four dwellings in the immediate area visible from water. Immediately south is the Burch dwelling on the edge of the bluff. South of the Birch dwelling is part of the Boy Scout property with considerable weekend and summer activity a the bluff and water. South of that parcel are two dwellings belonging to McDonalds. Below McDonalds is the remainder of the Boy Scout property with numerous dwellings and weeker and summer activity. South of the Scout Camp property are numerous dwellings heading int the Twin Springs subdivision. There are more dwellings visible on the Wisconsin side of thi section of the river than on the Minnesota side yet Wisconsin has a minimally disturbed designation while Minnesota has a rural residential designation. They should both be the san this area, rural residential. What criteria was used to determine the designation of the variou land management areas.

Page 70: It is also difficult to accept a Minimally Disturbed Land Designation and accompanying regulations along a section of the river that is designated Moderate Recreation with loud noisy powerboats, water skiers, PWC, a continuous line of white houseboats for mi beached along the islands with generators running, amplifiers blaring with music and dogs

RESPONSES

1. In creating the riverway, Congress specified that the northern 27 miles of the river segment be administered by the National Park Service and the southern 25 miles be administered by the states. See page 292 of the draft plan.

2. The boundary has been shifted from the north end of the Twin Springs Subdivision to the Arcola High Bridge.

COMMENTS

with the water use. The land owner is a user of the river also and should be able to enjoy the scenic beauty of the river from a shoreline vantage point as well as the boaters. Regulating land use under the Minimally Disturbed criteria here is excessive when considering the water use and the lack of requirements of boaters. The Rural Residential criteria would be much more compatible for the river use in the area.

Page 118: I believe that it is imperative that the membership of the Partnership Team be based on the Lower St. Croix Planning Task Force with representatives from the all stake holder groups.

Page 119: Under the Land Use Management section, the third paragraph states that "no riverway managing agency would have veto authority over the local government's decision." This paragraph is essential to allowing local government control and the land owners to exercise the remaining rights they do have.

Page 131: (Chart) W-6 should read "South of Osceola to the old stone railroad piers"
W-7 should read "Old stone railroad piers to Houlton

Page 284: Under Structure Color, local stone and maybe brick should be included.
Under River Setback, ordinary high water mark below the Arcola sandbar should be defined as 675 feet elevation.
Under Structure Height, 35 feet should be allowed for all land management areas outside of the Rivertown Districts. A reasonable two story house with adequate roof slope would easily reach 35 feet. With the 200 foot setback requirement a property owner may have to build a walk out basement and that would need to be included in the calculation for overall height. No mater what land management area the house is in it should be allowed typical construction which exceeds 30 feet. The proposed vegetation screening regulations should compensate for any height variation up to 35 feet.

Page 289: Under Active Social Recreation the speed limit should be stated as 50 mph maximum [illegible] a window of 40-50 mph.
Under Moderate Recreation the speed limit should be stated as a maximum of 30 mph due to the island and narrow channels in which the water craft operate. There are large watercraft plying these waters that are in excess of 30 feet and capable of doing 50 mph. These craft throw a very large and dangerous wake for other small craft in a confined area.

Page 290: Under Speed Limit, Active Social Recreation should be 50 mph and Moderate Recreation should be 30 mph.
Under Shore Activity Zone, the slow no wake zone should be within 200 feet of all shore line, swimmers and anchored boats (fishermen).

3 Page 291 Under Boat Ramps, the A S King plant ramp should not be developed as it adds to more congestion on an already over utilized river at peak periods. If these ramps are developed they should be regulated as to how many boats can launch from each site during certain days of the week (weekends).
Under Density Policy, this calculation should only apply below Stillwater in the lake area as the narrow channels above Stillwater do not support the same density.

RESPONSES

3. The proposed public water access is intended to provide free access to anglers, who generally use the river during off-peak periods. While the access would be used during busy times and would add watercraft to an already crowded resource, it would be unfair to suggest the general public is responsible for reducing crowding when watercraft from private homes, private marinas, and fee-based access points are not.

Appendix B has not addressed shoreland use by boaters with their white boats (vs. earth tor colors for houses), the noise from these beached boats (amplifiers with loud music, generators, horns, chainsaws), toilets or waste facilities and dump sta pst control and designated camping areas to control erosion of the island shorelines.

Thank you for your review of these comments and I look forward to your action on these in for this Draft EIS plan.

Sincerely,

Larry Wolf

Larry Wolf

COMMENTS

11/19/1999

Gene Andersen
617 Lake St.
Prescott, WI 54021
715-262-3668

Comments Re: Draft Lower St. Croix Cooperative Management Plan

As the representative of the City of Prescott, the City and I anticipated a more prudent and sensible process. The history of problems should have set the agenda for change.

At least in Wisconsin, NR118 and accompanying enforcement has resulted in a severely tarnished image for a once proud and respected Department of Natural Resources. Some of the problems can be traced to the arrogance of local DNR representatives and the legal backing they receive. Part can be traced to the unreasonable litigious inclinations of the DNR. Part to simple attitudes.

What did we expect?

1) Prescott (and we expect other cities such as Stillwater, Hudson - perhaps others) which have existed for more than a century feel that within the boundaries of our community, on lands that have been occupies for generations, where we have an urban community with intelligent elected officials and well trained and paid administrators: we are better equipped to handle our own issues without interference from outside governmental agencies. Particularly when they have a veto power and there is a threat of expensive litigation. DNR recommendations would be acceptable, but no veto.
2) The DNR relations with communities is in a tailspin and virtually all credibility and respect has been lost. Their attorneys with lots of time and money are a legal threat to cash strapped communities that have to pay city attorneys by the hour-causing great consternation to the citizenry. A pro-active program to reverse this trend should be immediately implemented - with public awareness.
3) The 50% rule should never have existed and should be expunged immediately. It makes no sense in a free country, a capitalistic society, where a home is the American Dream. It is unpatriotic, and inflammatory beyond need or reason. It is difficult, time consuming and another litigious issue that simply antagonizes homeowners and ultimately city administrators.

1 4) No wake zone. The no wake zone should be extended to the city limits of Prescott. Shore management within our community is difficult as boats have become ships, jet boats and "cigar" boats show off and wakes become tidal waves. The Prescott Public Beach popular with young children is pounded by wakes that throw small children flat on the shore. Shoreland, property, spawning beds, waterfowl nests are all destroyed. Responsible boaters usually do not go fast - or speed.

RESPONSES

1. The plan does not propose creating the no-wake zone recommended in this comment.

410

COMMENTS

RESPONSES

Boats anchored on Lake St. Croix are rocked, destroying the solitude, fisherman are endangered, noise pollution is intolerable. We recommend a no wake zone to the north city limits of Prescott before the next boating season.

Gene Andersen

COMMENTS

RESPONSES

November 24, 1999

Randy Thoreson
Lower Riverway Planning Coordinator
117 Main St. So.
Stillwater, MN 55082

Dear Mr. Thoreson:

Please include the following comments as part of the record on the draft Cooperative Management Plan/Environmental Impact Statement for the Lower St. Croix National Scenic Riverway.

1. On page V of the Summary it is stated that under the preferred alternative, protection of scenic resources, etc. would be improved compared to the no action alternative. I would like to know what the factual basis is for this statement. After reviewing the plan and Appendix A, the land use restrictions are less stringent than under today's rules and regulations. How are scenic resources, soil and vegetation, etc. protected more under this plan with fewer and less stringent land use regulations? This is the most important question that needs to be answered and properly addressed.

2. The planning process (caucus/negotiation) and the use of the Planning Task Force was severely flawed. I tried to be a part of this process but it became so lengthy (50 + meetings) that only those individuals with a personal interest (property owners and business owners) could stay with the process. The Task Force as a result was dominated by angry landowners and business owners and the fact the river is public waters and an asset to a much larger area than only those who live or have a business on the river got lost in the process and that shows up in the plan. Further, natural resource professionals and planners were more or less left out of the process. As a result, the studies and long term planning that needed to be done was negated and substituted with meetings trying to get various special interests to agree on something.

COMMENTS

Randy Thoreson
November 24, 1999
Page 2

3. The proposed management structure leaves all decisions on implementation and enforcement of the St. Croix River Regulations to the local governments (either city or county). Presently, the Department of Natural Resources must certify local actions such as variances, conditional use permits, etc.. At first blush, this sounds great. However, after thinking about that, there could be some real problems overtime. It would be possible for some city of county leaders to determine they don't like the river regulations and grant one variance after another or do nothing in regard to tree cutting violations or other standards that must be implemented.. That could cause some long term damage to the character of the river as well as conflicts between communities. The St. Croix River is a regional resource that would be difficult to manage with so many individual communities and counties making independent decisions. If nothing else, whether you agree with river regulations or not, uniformity in implementing and enforcing the rules along the river is of extreme importance. Without a certification process or some similar process, implementation and enforcement of the St. Croix River rules could be inconsistent between communities and the two states. It would be a major long term mistake for the Department of Natural Resources to back out of this process. By the time the Department of Natural Resources would initiate a lawsuit against a community, the damage would be done.

1 4. The proposed plan does not specify a minimum lot size for development along the river. Instead, it is assumed local zoning, lot width and setbacks will control density. I put on a developer's hat and with only the lot width and setback standards, I figured a building site could be approximately one acre in size. Today's standard is 2 ½ acres. I don't feel that it was the intent of the plan to allow increased density. Thus, the lack of a minimum lot size in all districts could increase development in the St. Croix District over what is allowed today as well as having inconsistent standards among similar communities. In addition, local zoning can change over time.

5. In small towns, there is no standard for color of structure in the proposed plan. Homes along the river in small towns such as St. Mary's Point and Lake St. Croix Beach are the most visible along the river. It seems earthtone colors would be appropriate in small towns. In historic towns such as Stillwater, it is not as important.

RESPONSES

1. The plan has been revised to propose a minimum lot size of one acre of net project area, but in no case less than 2.5 acres.

Randy Thoreson
November 24, 1999
Page 3

6. There are no restrictions on vegetative cutting in areas where there is no bluffline. In other words, if the property is level or below the bluff there are no restrictions proposed for tree cutting. Structures in these areas are close to the river and very visible in some cases. Allowing tree removal would make them more visible, thus conflicting with the purpose and intent of the riverway plan. Current regulations do contain standards in regard to tree cutting both between the river and along the bluffline.

7. Proposed language allows substandard structures to be expanded if visually inconspicuous. This is a very difficult standard to judge. In addition, it never fails many more trees are cut or damaged during the construction process and what you originally thought was going to be visually inconspicuous is now very visible. Additional standards such as prohibiting the height of the structure from being increased, minimum setbacks from bluff and river, and the extent of expansion would go further towards the goal of maintaining the scenic qualities of the river as well as providing a consistent standard for implementation.

8. The plan does not address open space design/cluster subdivision. With proper performance standards, open space design subdivisions should be encouraged in the river district.

9. I support the speed limit restrictions recommended by the Minnesota/ Wisconsin Boundary Area Commission.

Thank you for considering these comments. I look forward to your response.

Sincerely,

Dennis O'Donnell
14829 56th St. No.
Stillwater, MN 55082

COMMENTS

CLARENCE W. NELSON • 348 BASS. ST • P O BOX 231 • TAYLORS FALLS, MN 55084 • 651-465-[illegible]

To: Lower Riverway Planning Coordinator
117 Main Street S
Stillwater, MN 55082

From: Clarence Nelson, P O Box 231, Taylors Falls, MN 55084

Ref: Comments on Lower St. Croix River Draft Cooperative Management Plan/Environmental Impact Statement.

Before I get to the main point of this letter, may I commend the general thrust of the Draft Management Plan and urge approval and implementation of its preferred alternative. Above all, continue to administer the Scenic Riverway in conformance with the fundamental purposes defined in the original law, and in particular, "*. . . to preserve and protect (and restore and enhance where appropriate) . . . its natural and scenic resources.*" These original purposes are as sound today as the day they were first written, and—given the explosive urban sprawl that has taken place and the commercial pressures for development that continue to build—are principles needed even more today than they were at the outset to serve the broadest public interest in the next century.

1 Now to my main point—a point of criticism. There exists a major flaw in the apparatus for scenic protection of the St. Croix and the Riverway that is crying for attention. The problem does not appear to have been addressed—or even recognized—in the dialog within or about the Draft Plan. Since the Plan proclaims as its basic purpose "*. . . to provide a general direction for managing the area for the next 15 to 20 years . . .*", something needs to be incorporated into the working agenda of the Plan or set in motion on a separate track to correct the problem. I'm talking about the shortsightedness in drawing the initial boundary lines for the Riverway District, which in many areas fail to encompass the natural viewshed of the valley or include what can be plainly seen as an integral part of the landscape by viewers on the river or within the Riverway.

A case in point is the yellow billboard installed in the fall of 1996 a few hundred yards east of the interstate bridge along the north side of Hwy 8 in Wisconsin. If the property on which the billboard was installed were located within the defined Riverway, it would be clearly unlawful under Wisconsin law relating to signage in the Riverway. But it is not. So it appears immune from lawful action to force its removal. The billboard can be plainly seen from mid-river between the two interstate parks. It can be seen from scenic outlooks in the interstate parks. It can be seen from several valley locations within the Riverway. The current Riverway definition and the rules which allow intrusive development on lands integral to the

RESPONSES

1. Local governments are encouraged to protect the viewshed outside the formal riverway boundary by voluntarily extending their riverway controls to all lands within the viewshed.

COMMENTS

valley viewscape, lands that are inescapably visible to anyone seeking to enjoy the scenic Riverway, makes a travesty of the provisions of the law designed to "*preserve and protect . . . natural and scenic resources.*"

What is needed ultimately is a viewshed concept—whatever can be seen from within the valley bluff-top to bluff-top should fall within the purview of restrictions on scenic intrusion. Whatever would protrude above the bluff top, however far back, that is other than "visually inconspicuous" to observers in the valley should be subject to the resource-protecting restrictions. The boundaries of the Riverway (capital "R") should be *redrawn* to correspond to the true geography of the river valley. The additional land corridor in need of full scenic protection is only a tiny sliver of space relative to the total amount of occupied and developable land within the metropolitan orbit, but protecting this "*outstandingly remarkable*" scenic resource would be a grand public investment of enormous value to residents of and visitors to the greater metropolitan area and the valley. Expanding the Riverway to a viewshed concept may be an ambitious step, but so was the initial designation in 1972. Taking that expanded step is fully consistent with the original legislative concept to preserve and protect the scenic resources, and is a needed step to correct the overly timid implementation "architecture" that has allowed the type of incursion I have described. I don't know what would be involved to reach that span of protection or how long it would take, but it should certainly be part of any working agenda designed to guide the Riverway's development "*for the next 15 or 20 years.*"

Until the Riverway boundaries are redrawn, minimal wording changes, changes that extend protections presently in force on lands within the Riverway boundaries, could help fill the gap. One step in extending coverage would be to define the subject area to include all land areas that can be seen from the river. Better coverage would extend the subject area to include all lands that can be seen from within the Riverway as currently defined, in addition to those lands actually within the Riverway. The interstate parks also should be officially within the Riverway.

Thank you for the opportunity to comment on the Draft Management Plan.

Respectfully submitted,

Clarence Nelson

Clarence Nelson

November 28, 1999

RESPONSES

COMMENTS

Comments on the

Draft
Cooperative Management Plan
Environmental Impact Statement
Lower St. Croix National Scenic Riverway

The purposes, significance, exceptional resources and values, and vision statement laid out on pages 10 and 11 of the plan/EIS document, are well thought out. To meet the objectives, any changes from the draft preferred plan and the final one should go in the direction of alternative D - more protection, not less, of the resource and the opportunity to experience it as something special.

1 For many shoreowners and boaters on the riverway, the guts of the preferred alternative are in the zoning and waters surface use provisions, and they are in fact the key elements of resource protection in the plan. Therefore, the precedent set by the 1976 plan of listing the zoning and water surface use standards as appendices, should not be followed. When the final plan is published, what is now in Appendixes A and B should be brought forward into the main body of the plan. References to them as "suggested" and "guidelines" should be stricken. They should be called "standards to be incorporated into the zoning and water surface use rules that the state agencies take to hearing after the final plan is adopted". These changes are necessary in order to minimize the wiggle room that the present language and appendix status gives the managing agencies to go off in other directions when implementing the plan.

Specific to the zoning standards, those who know what the rules have been for over twenty years, realize that the proposed standards are a net relaxation of what has gone before. They are not - as opponents of the plan have misleadingly stated in their literature - something new and more onerous. Except for the increase in bluff setback and lowering of building height in the minimally disturbed districts, the standards are either the same or more flexible than now. Most notably, for owners of existing homes throughout the riverway district, substandard structures may now be improved and even replaced at their present location, under the new plan.

As to the waters surface use standards in Appendix B, changes are needed.

First, the eight to ten miles per hour speed in the quiet waters zone should be changed to eight. The range was put into the plan so that the agencies could delay facing the issue until rule-making time. There is ample reason now to go with the single lower number.

•I have run a series of tests on the river, motoring at various RPMs over measured river distances. These made it clear to me that 8 mph more accurately reflects the speeds that most boaters in the slow speed zone have been traveling for the last 20 years than does 10 mph..

•The reason for changing from the present qualitative definition of slow speed,

RESPONSES

1. Appendixes A and B will provide guidance for development of state land and water surface use regulations.

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PAGE

COMMENTS

to a rate of speed, is to make it more enforceable. There is no intent, in making the switch, to increase the speed of travel.

- Eight miles per hour is going to communicate to boaters that the idea is to go slow and enjoy the character of the river that caused it to be made a national wild and scenic river. Psychologically, I believe that eight conveys that intent much better than ten.
- Extensive reaches of the quiet waters zone are less than 200 feet wide, and thus will be slow no-wake zones for the full width of the river. The final EIS should present data on what parts of the zone are in fact less than or little more than 200 feet wide. I believe that the numbers will show that the narrow stretches are so extensive that either the entire quiet waters zone should be made slow no-wake, or that eight miles per hour should be adopted for the full width of the main channels in the entire zone. T
- The essence of "quiet waters" is quiet. The slower a motor turns over, the less noise it makes; therefore eight is superior to ten.
- The whole quiet waters zone is only 21 miles long. At ten miles an hour, one can travel the entire reach in two hours and six minutes. At 8 mph, the travel time is two hours and 38 minutes. That 32 minute difference does not warrant adopting the higher speed. In fact most boat trips in the quiet waters zone are probably less than three miles long one way, making the higher travel times produced by lower speeds, inconsequential.
- Our bias toward round numbers notwithstanding, the fact is the eight miles per hour is no harder to understand or comply with or enforce, than ten.

The plan's provision for no motors and electric motors in the backwaters upstream from William O'Brien Park, is essential for providing areas for the "peace and solitude", which is one of the purposes of the plan.

For the river downstream from the quiet waters zone, the 40 to 50 miles per hour proposed fails to carry out the purposes of the plan. Thirty miles per hour should be the standard for that entire reach.

- It is fast enough for water skiing.
- The distances are not such that higher speeds are necessary for getting from one place to another.
- A purpose of the plan is to "Accommodate a diverse range of recreational opportunities that do not detract from the exceptional natural, cultural, scenic, and aesthetic resources". Anything faster serves the boat riders' enjoyment of the machine, of speed for the pleasure of speed (and for many, the accompanying noise), but it is at the expense of their enjoyment of the resources.
- Noise is a paramount reason for holding down speed. At present, whether sitting on the deck at The Dock in Stillwater, or in the yard of a home on top of the bluff below the Kinnikinnik, the noise of the boats and the personal watercraft is at best unacceptable, and for many intolerable. Inarguably, it detracts from the experiencing of the natural, cultural, scenic, and aesthetic resources of the riverway.

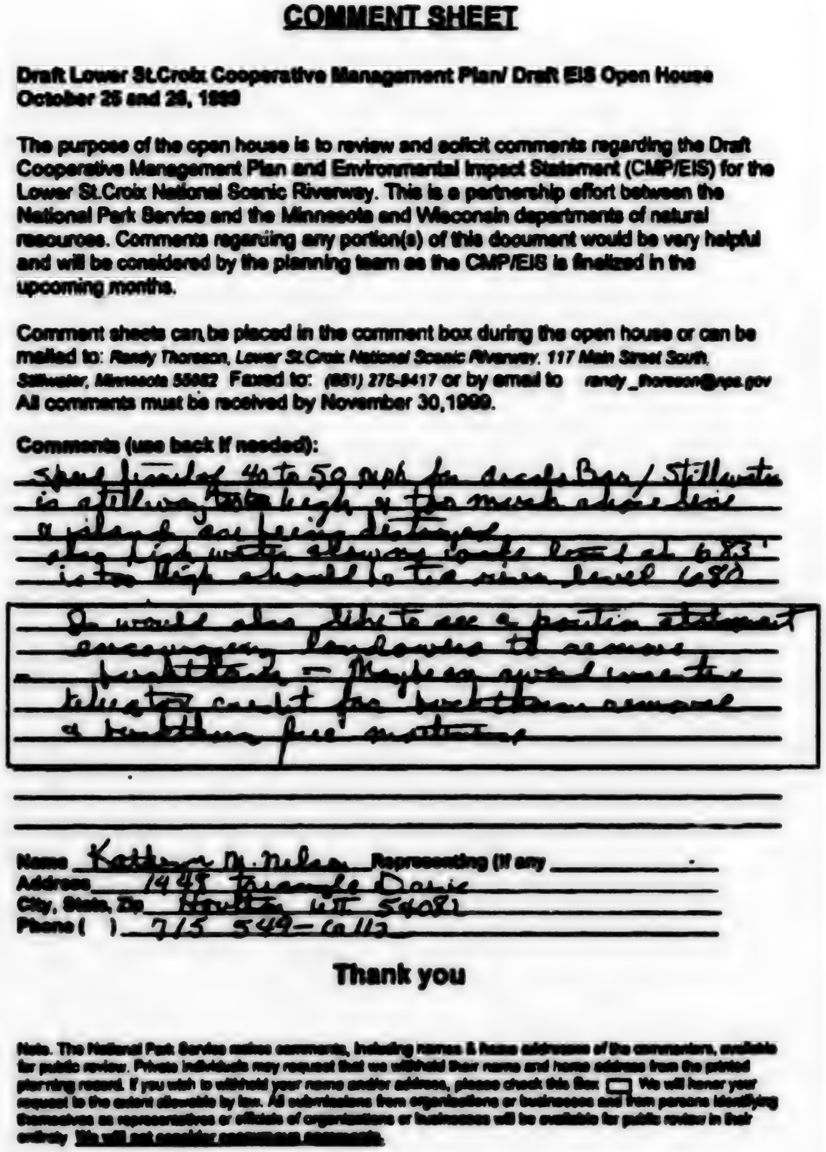
RESPONSES

Regarding high-water no-wake, 683 is too high. When the water is at that elevation at Stillwater, above Marine it is well up the side of the banks of the main shore and the islands, and that is when wakes are their most erosive. For my shoreline to be protected at least to some extent from the non-natural erosion from waves generated by motorboats moving faster than no-wake, the trigger elevation for slow-no-wake should be set at 680, which is still a full five feet above normal water level.

The question of whether the DNRs should retain their present veto power over locally-granted zoning variances and conditional use permits within the riverway district, is a close call. On balance, I think the preferred option for management structure set out on pages 118 and 119 has it right. The role of the Lower St. Croix Partnership Team in reviewing and advising on variances should in fact bring a greater degree of consistency than the two DNRs have themselves been able to bring about, to the application of the zoning standards by the many zoning authorities on both sides of the river. So long as the DNRs will appeal local decisions that the Partnership Team recommends be challenged, the proposed system will work. In fact, not having the burden of the veto power may make the DNRs - Minnesota in particular -feel more free to focus on resource protection in its comments on variance and conditional use applications.

Bill and Sharon Clapp
19855 Quinnell Ave. N.
Scandia MN 55073

COMMENTS	RESPONSES



COMMENT SHEET

Draft Lower St.Croix Cooperative Management Plan/ Draft EIS Open House
October 25 and 26, 1999

The purpose of the open house is to review and solicit comments regarding the Draft Cooperative Management Plan and Environmental Impact Statement (CMP/EIS) for the Lower St.Croix National Scenic Riverway. This is a partnership effort between the National Park Service and the Minnesota and Wisconsin departments of natural resources. Comments regarding any portion(s) of this document would be very helpful and will be considered by the planning team as the CMP/EIS is finalized in the upcoming months.

Comment sheets can be placed in the comment box during the open house or can be mailed to: *Randy Thoreson, Lower St.Croix National Scenic Riverway, 117 Main Street South, Stillwater, Minnesota 55082* Faxed to: *(651) 275-9417* or by email to *randy_thoreson@nps.gov*
All comments must be received by November 30,1999.

Comments (use back if needed):

speed limit of 40 to 50 mph for Arcola Bar / Stillwater is still way too high & the marsh along shore & islands are being destroyed
also high water slow no wake level at 683' is too high should be the river level 680

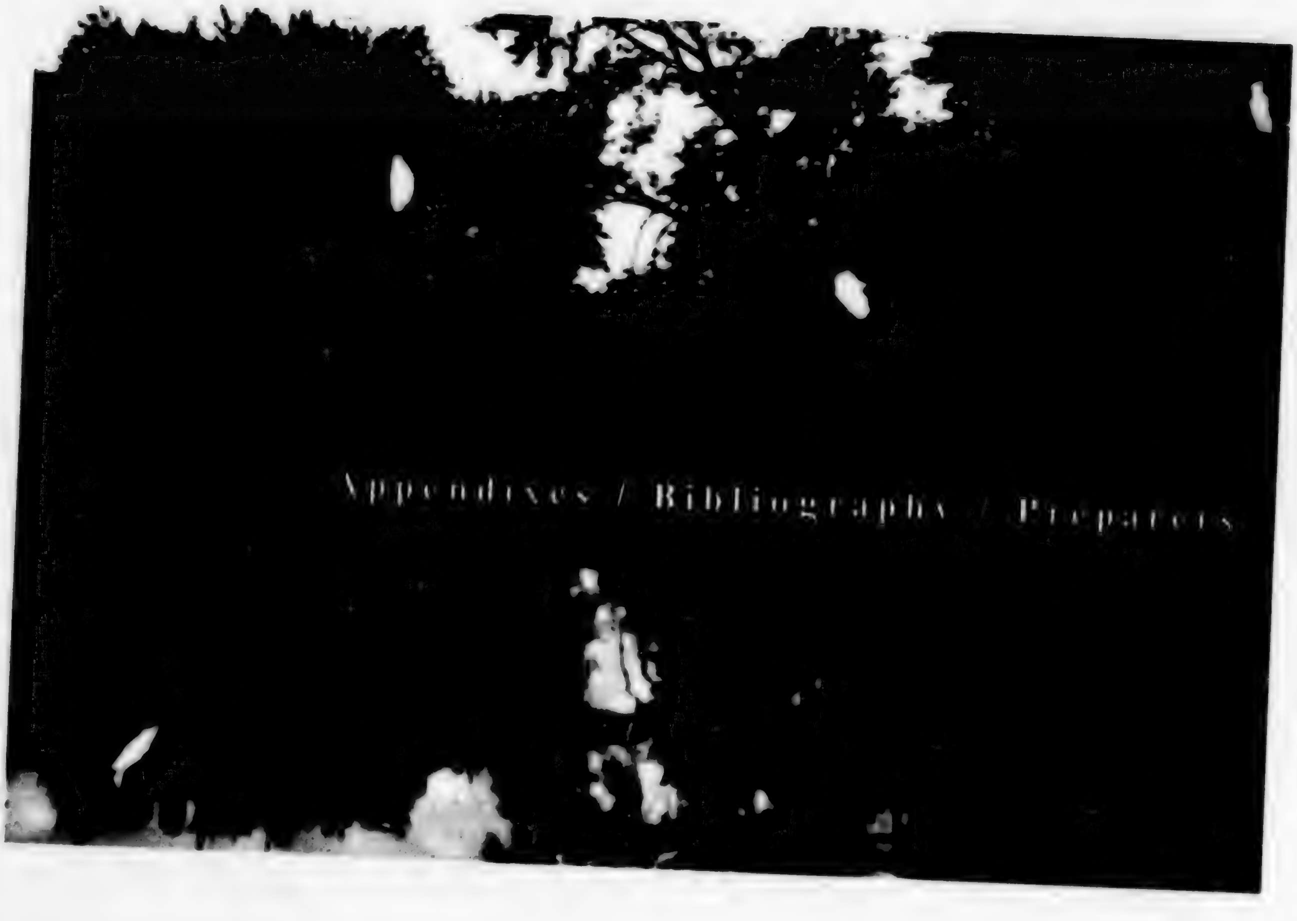
1 I would also like to see a position statement encouraging landowners to remove buckthorn — Maybe an award, incentive tax [illegible] credit for buckthorn removal & buckthorn free [illegible]

Name Kathryn M. Nelson Representing (If any ____________
Address 1448 [illegible] Drive
City, State, Zip Houlton WI 54082
Phone ( ) 715 549-6112

Thank you

Note. The National Park Service makes comments, including names & home addresses of the commenters, available for public review. Private individuals may request that we withhold their name and home address from the printed planning record. If you wish to withhold your name and/or address, please check this Box ☐. We will honor your request to the extent allowable by law. All submissions from organizations or businesses and from persons identifying themselves as representatives or officials of organizations or businesses will be available for public review in their entirety. We will not consider anonymous comments.

1. The plan has been revised to encourage landowners to remove buckthorn. Management of invasive exotic plant species will also be addressed in development of state land use regulations.



Appendixes / Bibliography / Preparers

APPENDIX A: LAND USE REGULATION GUIDELINES

The purpose of this appendix is to provide suggested zoning guidelines for lands within the riverway boundary (as published in the *Federal Register*), between the dam at St. Croix Falls / Taylors Falls and the confluence with the Mississippi River.

Rationale: Local governments adopt zoning ordinances based on state rules. Special zoning guidelines are needed in the riverway to protect the river's outstanding values as discussed in the cooperative management plan. Lot development standards are needed to protect steep slopes to minimize erosion, prevent water quality degradation, and prevent negative visual impacts. River setback standards are needed for structures to minimize erosion, prevent water quality degradation, and prevent negative visual impacts. Minimum lot width and lot size standards are needed to ensure that development in certain areas does not change the character of the setting and to prevent additional impacts as seen from the river. Structure height standards are needed to help limit visual impacts. Limits on types of uses are needed to ensure that additional development does not change the character of the setting and to help prevent additional impacts. Vegetative management standards are needed to protect scenic character, reduce erosion potential, maintain and restore historically significant plant communities, and enhance diversity. Standards for nonconforming or substandard structures are needed to minimize visual and natural resource impacts.

Ordinances will have a general policy statement based on the following: "In order to reduce the effects of overcrowding and poorly planned shoreland development, to provide sufficient space on lots for sanitary facilities, to minimize flood damage, to maintain property values, and to preserve and maintain the exceptional scenic, natural and cultural characteristics of the waters and related lands of the Lower St. Croix River Valley in a manner consistent with the National Wild and Scenic Rivers Act (PL 90-542), the Lower St. Croix Act (PL 92-560), the Minnesota Lower St. Croix Act (M.S. 103F.351 and the Wisconsin Lower St. Croix Act W.S. 30.27), the (local government) hereby adopts the following provisions to be applicable to the St. Croix River District of the (local government) as herein designated, and as a section of the (local government) zoning code."

All codes will include the following definitions:

Bluffline is the top of a slope preservation zone.

Net project area means developable land area minus slope preservation zones, floodplains, road rights-of-way, required setbacks, and wetlands.

St. Croix River District includes all lands within the riverway boundary (as published in the *Federal Register)* between the dam at St. Croix Falls / Taylors Falls and the confluence of the Mississippi River.

Slope preservation zone means areas with slopes greater than 12%, with the horizontal interval of measurement not exceeding 50 feet.

Visually inconspicuous means difficult to see or not readily noticeable in summer months as viewed from the river.

All codes will include the following standards:

In **slope preservation zones**, there will be no structures and no grading or filling, and vegetation management will follow standards described elsewhere. Structures will be set back at least 40 feet from all blufflines.

Bluffline setback: On blufflines visible from the river (without vegetation), structures will meet the following setback requirements: 40 feet in river town, small town-historic, and small town districts; 100 feet in the rural resi-

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dential district; 200 feet in the conservation district.

Structure color: In all districts, structures designated as historic or in designated historic districts may use earthtone colors, or may use colors appropriate to the period in history for which they were designated. Other new or expanded structures will conform to the following standards: Earthtone color will be used for all new or expanded structures in all districts except the river town district. In the river town district, structure color requirements will be determined by local ordinance.

Minimum lot width: In the rivertown zoning district, minimum lot width will be determined by the community's underlying zoning ordinance. In other districts, the following minimum lot width standards will apply (at building line and at side nearest and parallel to the river): 100 feet in the small town-historic and small town districts, 200 feet in the rural residential district, 250 feet in the conservation district.

Minimum lot size: In the river town, small town, and small town historic districts, minimum lot size will be determined by the community's underlying zoning ordinance. In the rural residential and conservation districts, all lots will be a minimum of 2.5 acres and contain at least 1 acre of net project area. Where city sewer services are not available, each lot will have adequate land area for one principal dwelling structure and two onsite sewage treatment systems.

River setback: Structures will meet the following setback requirements from the river's edge: 100 feet in the rivertown, small town-historic, and small town districts and 200 feet in the rural residential and conservation districts.

Structure height: New or expanded structures will meet the following maximum height requirements: 45 feet in the rivertown district; 35 feet in the small town-historic, small town, and rural residential districts; and 25 feet in the conservation district. Structure height will be measured between the lowest exposed surface of the structure on the side facing the river and the uppermost point of the structure.

Vegetation management: All districts will require a restriction on disturbing vegetation in slope preservation zones within 200 feet of the rivers edge and within 40 feet of blufflines to protect scenic character and reduce the potential for erosion. Vegetative management standards will not prevent the removal of diseased or hazard trees, designated noxious weeds, or exotic species. These standards will also allow management practices to restore and promote preferred plant communities, such as successional climax forest and presettlement disturbed oak savanna ecotypes. Vegetative screening of structures will be emphasized over maintenance of preferred plant communities. Management actions will encourage, but not require, maintenance and restoration of preferred plant communities on private lands.

Codes will include appropriate sections of the following concerning permitted uses: In the rivertown district, permitted uses will be those allowed by the community's underlying zoning ordinance. In the small town-historic and small town districts, permitted uses include single-family structures; other uses permitted by the community's underlying zoning ordinance may be allowed as conditional uses. In the rural residential and conservation districts, permitted uses include single-family structures and agriculture. In the rivertown and small town-historic districts, there will be historic preservation ordinances and historic-theme architectural standards for new development. In the small town-historic and small town districts, new commercial and multifamily uses will not be allowed, but commercial and multifamily uses will become conditionally permitted uses and not be "nonconforming." Permitted uses in the rural residential and conservation districts include waysides, rest areas and overlooks, government resource management, and public and quasi-public natural resource educational facilities.

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TABLE A-1: PROPOSED LAND USE REGULATIONS BETWEEN EXISTING STATE RULES AND PROPOSED RULES WITH RATIONALE FOR CHANGE

Topic	MN Rules	WI Rules	Proposal	Rationale
Bluffline setback-river town, small town, small town historic	40'	40'	40'	Existing standards adequately protect resources in developed areas
Bluffline setback-rural	100'	100'	100'	Existing standards adequately protect resources
Bluffline setback – conservation	100'	100'	200'	Greater level of protection needed for these very natural areas
Structure color-river town	Earthtone	Earthtone	Local standards*	Structure color standards determined by local ordinance to meet riverway character.
Structure color – rural, conservation, small town, small town historic	Earthtone	Earthtone	Earthtone*	Existing standards adequately protect resources
Minimum lot width – river town	100/150'**	100'	Determined by underlying local zoning code	Local zoning is adequate to protect lot width in developed urban areas
Minimum lot width – small town, small town historic	100/150'**	100'	100'	Existing standards adequately protect resources; uniformity between states desirable
Minimum lot width rural	200	200	200	Existing standards adequately protect resources
Minimum lot width – conservation	200	200	250	Greater level of protection needed for these very natural areas
Minimum lot size – river town, small town, small town historic	20,000 sq.ft./1 acre**	Local zoning in effect 1/1/76	Local zoning***	Local zoning is adequate to protect lot size in developed urban areas, provided there is adequate area for on-site sewage treatment
Minimum lot size – rural conservation	2.5 acres	1 acre of net project area****	2.5 acres and contain at least 1 acre of net project area, whichever is greater ***	To protect density, character, and resource values of those these areas, a minimum lot size is applicable
River setback in river town, small town, small town historic	100'	100'	100'	Existing standards adequately protect resources
River setback in rural, conservation	200'	200'	200'	Existing standards adequately protect resources
Structure height-river town	35'	35'	45'	Greater flexibility appropriate for developed urban areas

Topic	MN Rules	WI Rules	Proposal	Rationale
Structure height-small town, small town historic, rural	35'	35'	35'	Existing standards adequately protect resources
Structure height – conservation	35'	35'	25'	Increased level of protection needed
Vegetation management (all districts)	Vegetative cutting restricted within 100 of river in river town, small town, small town historic; 200 feet of river in rural, park, natural, minimally disturbed; on steep slopes	Vegetative cutting restricted within 200 feet of river; within 40 feet of bluffline; on steep slopes; exemption provided for woodland tax law, forest crop law	Vegetative cutting restricted within 200 feet of river-edge; within 40 feet of bluffline; on steep slopes; exemption for restoration of preferred plant communities in areas where no impact on screening of structures	Interstate standardization needed to protect visual character; flexibility valuable for restoration of native species
Permitted uses – river town	Conservancy, agriculture, single-family residential, parks; other uses permitted by local zoning would be conditionally permitted	Conservancy, agriculture, single-family residential, parks; other uses permitted by local zoning	All uses permitted by local zoning	Increased flexibility appropriate in developed urban areas
Permitted uses – small town, small town historic	Conservancy, agriculture, single-family residential, parks; other uses permitted by local zoning would be conditionally permitted	Conservancy, agriculture, single-family residential, parks; other uses permitted by local zoning	Conservancy, agriculture, single-family residential, parks; other uses permitted by local zoning would be conditionally permitted.	Some increase in flexibility, especially for existing structures, appropriate in these largely developed areas
Permitted uses – rural, conservation	Conservancy, agriculture, single-family residential, parks	Conservancy, agriculture, single-family residential, parks	Conservancy, agriculture, single-family residential, parks	Existing standards adequately protect resources

*A structure designated as historic or located in a designated historic district may use colors appropriate to the period in history for which it was designated.

**Difference in standard based on whether lot is sewered or unsewered.

***Where city sewer services are not available, each lot must have adequate land area for one principal dwelling structure and two on-site sewage treatment systems.

***-Net project area means developable land area minus slope preservation zones, floodplains, roads right-of-way, required setbacks and wetlands.

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APPENDIX B: WATER SURFACE USE GUIDELINES

Watercraft speed regulations were first established on the lower St. Croix River in the mid-1960s in the form of limited slow-no-wake zones in the Hudson, Kinnickinnic, and Prescott narrows. Those limits were established by order of the Washington County Sheriff.
As boating activity on the river grew rapidly in the 1960s and 1970s, there were increasing concerns that the river was becoming unsafe and that additional speed regulations would need to be imposed. The *Scenic River Study* of the Lower St. Croix, prepared in 1971 as directed by Congress (*National Wild and Scenic Rivers Act, 1968*), concluded boating use of the river was by then unacceptably overcrowded and action was needed to reduce the perceived hazards associated with speeding boats in close proximity to one another, to enhance safety and to reduce the impacts of boat wakes.

Following designation of the Lower St. Croix (*Lower St. Croix Act, 1972*) the interagency planning team undertook development of a management approach for regulating boating. The result was appendix B of the *Master Plan (1976)*, which contained a framework for state and federal boating regulations. Based on that framework, the states and the National Park Service in 1977 imposed water surface use regulations on the riverway.

In 1978 the Lower St. Croix Management Commission developed a *Riverway Management Policy Resolution* that provided guidance for future changes in those regulations. Based on that guidance, the state-federal regulations were amended in 1978, 1981, 1984, 1987, 1991 and 1996.

The purpose of this appendix is to provide a framework for future changes in the regulations. It is based on the following four water management districts:

WATER MANAGEMENT DISTRICTS

Active Social Recreation

In this district are found large numbers of both people and watercraft. The types of boats found in this area would vary widely: while most would be motorized, nonmotorized watercraft may be present. Boat speeds would also vary significantly; they would be strictly controlled in some limited areas (such as narrows areas), but the highest boat speeds allowed on the river would be in this district.

Moderate Recreation

This district may contain large numbers of watercraft at times, but use in this area would tend to be more moderate in terms of numbers of people and watercraft on the water, and in terms of the intensity of activity. A variety of boat types, primarily motorized watercraft, may be present. Boats may travel at different speeds, but tend toward slower speeds than the Active Social Recreation District, although faster than the Quiet Waters and Natural Waters districts. Boat speeds may be very strictly controlled in some limited areas (such as narrows areas); there would be an overall limit on boat speeds.

Quiet Waters

This district would provide for low-impact boating activities, but during peak use periods large numbers of watercraft could be encountered. Management would be directed toward recreational uses that leave the surface of the river largely undisturbed. Both motorized and nonmotorized watercraft would be able to use these areas. Watercraft speeds would be kept low to preserve the river's tranquil quality.

Natural Waters

This district would provide an experience emphasizing a sense of peace and quiet, with some opportunities for solitude. Watercraft numbers would usually be very low. Most watercraft would be human-powered. Watercraft speeds would be kept low.

BOATING MANAGEMENT

The following regulatory approach to managing boating is recommended:

Speed Limits

Speed limits should be imposed on the St. Croix as follows, based on management area classification in the plan:

Active Social Recreation: 40 mph between sunrise and sunset, and 20 mph between sunset and sunrise

Moderate Recreation: 20 mph

Quiet Waters: slow speed, but in no case greater than 15 mph

Natural: slow-no-wake

Shore Activity Zone

A shore activity zone is needed to reduce boat speeds near shore to ensure the safety of swimmers and moored and beached boats and to prevent erosion. Boat speeds should be restricted to slow-no-wake within 100 feet of all shore, including islands, within 100 feet of swimmers, and within 100 feet of nonmotorized craft.

Slow-No-Wake Zones in Narrows Areas

Slow-no-wake zones have reduced boat speed (to increase safety, reduce resource damage and preserve diverse experiences) in narrows areas of parts of the Lower St. Croix since the 1960s. They exist to increase safety, reduce resource damage and preserve diverse experiences. Slow-no-wake speed limits have historically been established in areas that exceed density standards.

High-Water No-Wake

During periods of high water, the river contacts the shore in areas that are highly susceptible to erosion. Watercraft traveling at speeds above a slow-no-wake speed produce wakes that accelerate erosion on these unstable shore areas, so speeds need to be restricted during these high-water events. All boating should be limited to a slow-no-wake speed whenever river levels reach or exceed 683 feet as measured at the Stillwater gauge.

Density Policy

The potential need for speed regulations should be studied when density exceeds 15 acres of water per moving boat, and speed regulations need to be imposed when density exceeds 10 acres of water per moving boat.

Craft Type Restrictions

Amphibious craft should not be permitted to drive onto publicly owned shore areas except at boat ramps. Personal watercraft is required to operate at no-wake speeds near all shore, including islands and swimmers. This distance is set by state law and is 150 feet in Minnesota and 200 feet in Wisconsin.

Boat Noise

Watercraft noise limits are established by state law in each state.

ACCESS

Large numbers of watercraft use the Lower St. Croix on summer weekends. Management issues associated with high use include potential safety problems, potential resource damage and strong management interest in preserving the existing diversity of recreational uses. In addition to water surface use controls aimed at managing existing use, access controls are justified to prevent significant growth in boating activity. Access to the river comes through private property, unlimited access from the Mississippi River at the mouth of the St. Croix, and public and quasi-public access from boat ramps and marinas.

Private Property

Residential riparian owners have a right to access the water through their property, but the exercise of that right is limited to their personal needs. Unless limited by other requirements, a dock may extend waterward the greater distance of: 1) a boat length, 2) the distance to the 4-foot water depth contour (at normal low water, which is 675 feet elevation from Stillwater south), or 3) the distance to a deeper contour if required by the draft of the craft using the dock but in no case should the dock extend beyond the 100-foot shore activity zone. The states should establish standards for allowable dock size.

Mooring buoys must be the minimum size and number necessary (in combination with berthage) to meet the owner's personal needs and must be placed within the 100-foot shore activity zone adjacent to the owner's property.

Single riparian parcels in common ownership may be allowed a combination of berthage and moorage that total one watercraft per buildable frontage lot equivalent to what would be allowed if the property was developed for single-family homes. The total number of watercraft must be served by one common dock or pier.

Resource limitations of the site and river cannot be exceeded.

Mississippi River

The states should work with other agencies to improve the recreational appeal of this portion of the Mississippi as a way to encourage boaters to stay on that river.

Boat Ramps

There should be no new or expanded boat ramps or car-trailer parking on the Lower St. Croix, except for completion of the Minnesota public water access planned in the stretch of river near the A.S. King Generating Plant. State and local units of government are strongly encouraged to restrict parking adjacent to all launch ramps, public and private, on lands under their jurisdiction.

Marinas

New marinas should not be allowed on the riverway, and existing marinas should not be permitted to expand in any way, including dry storage. Marina capacity should not be transferred from one marina to another.

Public Law 92-560
92nd Congress, S. 1928
October 25, 1972

An Act

86 STAT. 1174

To amend the Wild and Scenic Rivers Act by designating a segment of the Saint Croix River, Minnesota and Wisconsin, as a component of the national wild and scenic rivers system.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Lower Saint Croix River Act of 1972".

Lower Saint Croix River Act of 1972.

SEC. 2. Section 3(a) of the Wild and Scenic Rivers Act (82 Stat. 907; 16 U.S.C. 1274(a)) is amended by adding at the end thereof the following:

"(9) LOWER SAINT CROIX, MINNESOTA AND WISCONSIN.—The segment between the dam near Taylors Falls and its confluence with the Mississippi River: *Provided*, (i) That the upper twenty-seven miles of this river segment shall be administered by the Secretary of the Interior; and (ii) That the lower twenty-five miles shall be designated by the Secretary upon his approval of an application for such designation made by the Governors of the States of Minnesota and Wisconsin."

Development plan.

SEC. 3. The Secretary of the Interior shall, within one year following the date of enactment of this Act, take, with respect to the Lower Saint Croix River segment, such action as is provided for under section 3(b) of the Wild and Scenic Rivers Act: *Provided*, That (a) the action required by such section shall be undertaken jointly by the Secretary and the appropriate agencies of the affected States; (b) the development plan required by such section shall be construed to be a comprehensive master plan which shall include, but not be limited to, a determination of the lands, waters, and interests therein to be acquired, developed, and administered by the agencies or political subdivisions of the affected States; and (c) such development plan shall provide for State administration of the lower twenty-five miles of the Lower Saint Croix River segment and for continued administration by the States of Minnesota and Wisconsin of such State parks and fish hatcheries as now lie within the twenty-seven-mile segment to be administered by the Secretary of the Interior.

Land acquisition.

SEC. 4. Notwithstanding any provision of the Wild and Scenic Rivers Act which limits acquisition authority within a river segment to be administered by a Federal agency, the States of Minnesota and Wisconsin may acquire within the twenty-seven-mile segment of the Lower Saint Croix River segment to be administered by the Secretary of the Interior such lands as may be proposed for their acquisition, development, operation, and maintenance pursuant to the development plan required by section 3 of this Act.

Navigation aids.

SEC. 5. Nothing in this Act shall be deemed to impair or otherwise affect such statutory authority as may be vested in the Secretary of the Department in which the Coast Guard is operating or the Secretary of the Army for the maintenance of navigation aids and navigation improvements.

Appropriation.

SEC. 6. (a) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act, but not to exceed $7,275,000 for the acquisition and development of lands and interests therein within the boundaries of the twenty-seven-mile segment of the Lower Saint Croix River segment to be administered by the Secretary of the Interior.

January 3, 1975 - 3 - **Pub. Law 93-621**

88 STAT. 2096

(c) In clause (i) of subsection (b) of section 7 strike the final comma and the following word "and" and insert in lieu thereof a colon and the following proviso: "*Provided*, That if any Act designating any river or rivers for potential addition to the national wild and scenic rivers system provides a period for the study or studies which exceeds such three complete fiscal year period the period provided for in such Act shall be substituted for the three complete fiscal year period in the provisions of this clause (i); and". 16 USC 1278.

(d) In the fourth sentence of subsection (a) of section 4: 16 USC 1275.

(1) between "rivers" and "with" insert "(i)", and

(2) strike "system." and insert in lieu thereof "system, and (ii) which possess the greatest proportion of private lands within their areas.".

Sec. 2. Subsection (a) of section 6 of the Lower Saint Croix River Act of 1972 (86 Stat. 1174) is amended by deleting "$7,275,000" and inserting in lieu thereof "$19,000,000". 16 USC 1274 note.

Approved January 3, 1975.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 93-1359 accompanying H.R. 14791 (Comm. on Interior and Insular Affairs) and No. 93-1645 (Comm. on Conference).
SENATE REPORT No. 93-1207 (Comm. on Interior and Insular Affairs).
CONGRESSIONAL RECORD, Vol. 120 (1974):
Oct. 3, considered and passed Senate.
Nov. 18, considered and passed House, amended, in lieu of H.R. 14791.
Dec. 20, House and Senate agreed to conference report.

Public Law 93-621
93rd Congress, S. 3022
January 3, 1975

An Act

88 STAT. 1934

To amend the Wild and Scenic Rivers Act (82 Stat. 906), as amended, to designate segments of certain rivers for possible inclusion in the national wild and scenic rivers system; to amend the Lower Saint Croix River Act of 1972 (86 Stat. 1174), and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Wild and Scenic Rivers Act (82 Stat. 906), as amended, is further amended as follows:

Wild and Scenic Rivers Act, amendments.
16 USC 1276.

(a) In subsection (a) of section 5 after paragraph (27) insert the following new paragraphs:

"(28) American, California: The North Fork from the Cedars to the Auburn Reservoir.

"(29) Au Sable, Michigan: The segment downstream from Foot Dam to Oscoda and upstream from Loud Reservoir to its source, including its principal tributaries and excluding Mio and Bamfield Reservoirs.

"(30) Big Thompson, Colorado: The segment from its source to the boundary of Rocky Mountain National Park.

"(31) Cache la Poudre, Colorado: Both forks from their sources to their confluence, thence the Cache la Poudre to the eastern boundary of Roosevelt National Forest.

"(32) Cahaba, Alabama: The segment from its junction with United States Highway 31 south of Birmingham downstream to its junction with United States Highway 80 west of Selma.

"(33) Clarks Fork, Wyoming: The segment from the Clark's Fork Canyon to the Crandall Creek Bridge.

"(34) Colorado, Colorado and Utah: The segment from its confluence with the Dolores River, Utah, upstream to a point 19.5 miles from the Utah-Colorado border in Colorado.

"(35) Conejos, Colorado: The three forks from their sources to their confluence, thence the Conejos to its first junction with State Highway 17, excluding Platoro Reservoir.

"(36) Elk, Colorado: The segment from its source to Clark.

"(37) Encampment, Colorado: The Main Fork and West Fork to their confluence, thence the Encampment to the Colorado-Wyoming border, including the tributaries and headwaters.

"(38) Green, Colorado: The entire segment within the State of Colorado.

"(39) Gunnison, Colorado: The segment from the upstream (southern) boundary of the Black Canyon of the Gunnison National Monument to its confluence with the North Fork.

"(40) Illinois, Oklahoma: The segment from Tenkiller Ferry Reservoir upstream to the Arkansas-Oklahoma border, including the Flint and Barren Fork Creeks.

"(41) John Day, Oregon: The main stem from Service Creek Bridge (at river mile 157) downstream to Tumwater Falls (at river mile 10).

"(42) Kettle, Minnesota: The entire segment within the State of Minnesota.

"(43) Los Pinos, Colorado: The segment from its source, including the tributaries and headwaters within the San Juan Primitive Area, to the northern boundary of the Granite Peak Ranch.

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"(44) Manistee, Michigan: The entire river from its source to Manistee Lake, including its principal tributaries and excluding Tippy and Hodenpyl Reservoirs.

"(45) Nolichuckey, Tennessee and North Carolina: The entire main stem.

"(46) Owyhee, South Fork, Oregon: The main stem from the Oregon-Idaho border downstream to the Owyhee Reservoir.

"(47) Piedra, Colorado: The Middle Fork and East Fork from their sources to their confluence, thence the Piedra to its junction with Colorado Highway 160, including the tributaries and headwaters on national forest lands.

"(48) Shepaug, Connecticut: The entire river.

"(49) Sipsey Fork, West Fork, Alabama: The segment, including its tributaries, from the impoundment formed by the Lewis M. Smith Dam upstream to its source in the William B. Bankhead National Forest.

"(50) Snake, Wyoming: The segment from the southern boundaries of Teton National Park to the entrance to Palisades Reservoir.

"(51) Sweetwater, Wyoming: The segment from Wilson Bar downstream to Spring Creek.

"(52) Tuolumne, California: The main river from its source on Mount Dana and Mount Lyell in Yosemite National Park to Don Pedro Reservoir.

"(53) Upper Mississippi, Minnesota: The segment from its source at the outlet of Itasca Lake to its junction with the northwestern boundary of the city of Anoka.

"(54) Wisconsin, Wisconsin: The segment from Prairie du Sac to its confluence with the Mississippi River at Prairie du Chien.

"(55) Yampa, Colorado: The segment within the boundaries of the Dinosaur National Monument.

"(56) Dolores, Colorado: The segment of the main stem from Rico upstream to its source, including its headwaters; the West Dolores from its source, including its headwaters, downstream to its confluence with the main stem; and the segment from the west boundary, section 2, township 38 north, range 16 west, NMPM, below the proposed McPhee Dam, downstream to the Colorado-Utah border, excluding the segment from one mile above Highway 90 to the confluence of the San Miguel River."

16 USC 1276.

(b) In section 5 reletter subsections (b) and (c) as (c) and (d), respectively, and insert a new subsection (b), as follows:

Studies and reports.

"(b)(1) The studies of rivers named in subparagraphs (28) through (55) of subsection (a) of this section shall be completed and reports thereon submitted by not later than October 2, 1979: *Provided*, That with respect to the rivers named in subparagraphs (33), (50), and (51), the Secretaries shall not commence any studies until (i) the State legislature has acted with respect to such rivers or (ii) one year from the date of enactment of this Act, whichever is earlier.

"(2) The study of the river named in subparagraph (56) of subsection (a) of this section shall be completed and the report thereon submitted by not later than January 3, 1976.

Appropriations.

"(3) There are authorized to be appropriated for the purpose of conducting the studies of the rivers named in subparagraphs (28) through (56) such sums as may be necessary, but not more than $2,175,000."

Limitation.

(b) No funds otherwise authorized to be appropriated by this section shall be expended by the Secretary of the Interior until he has determined that the States of Minnesota and Wisconsin have initiated such land acquisition and development as may be proposed pursuant to the development plan required by section 3 of this Act, and in no event shall the Secretary of the Interior expend more than $2,550,000 of the funds authorized to be appropriated by this section in the first fiscal year following completion of the development plan required by section 3 of this Act. The balance of funds authorized to be appropriated by this section shall be expended by the Secretary of the Interior at such times as he finds that the States of Minnesota and Wisconsin have made satisfactory progress in their implementation of the development plan required by section 3 of this Act.

Approved October 25, 1972.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 92-1579 (Comm. on Interior and Insular Affairs).
SENATE REPORT No. 92-1279 (Comm. on Interior and Insular Affairs).
CONGRESSIONAL RECORD, Vol. 118 (1972):
    Oct. 9, considered and passed Senate.
    Oct. 13, considered and passed House.
WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 8, No. 44:
    Oct. 28, Presidential statement.

MINNESOTA STATUTES:

LOWER ST. CROIX RIVER

103F.351 LOWER ST. CROIX WILD AND SCENIC RIVER ACT.

Subdivision 1. Findings. The lower St. Croix River, between the dam near Taylors Falls and its confluence with the Mississippi River, constitutes a relatively undeveloped scenic and recreational asset lying close to the largest densely populated area of the state. The preservation of this unique scenic and recreational asset is in the public interest and will benefit the health and welfare of the citizens of the state. The state recognizes and concurs in the inclusion of the lower St. Croix River into the federal wild and scenic rivers system by the Lower St. Croix River Act of the 92nd Congress, Public Law Number 92-560. The authorizations of the state are necessary to the preservation and administration of the lower St. Croix River as a wild and scenic river, particularly in relation to those portions of the river that are to be jointly preserved and administered as a wild and scenic river by this state and Wisconsin.

Subd. 2. Comprehensive master plan. (a) The commissioner of natural resources shall join with the secretary of the United States Department of the Interior and the appropriate agency of the state of Wisconsin in the preparation of the comprehensive master plan relating to boundaries, classification, and development required by section 3 of the Lower St. Croix River Act of 1972, and by section 3(b) of the Wild and Scenic Rivers Act, Public Law Number 90-542.

(b) The commissioner shall make the proposed comprehensive master plan available to affected local governmental bodies, shoreland owners, conservation and outdoor recreation groups, and the general public.

(c) Not less than 30 days after making the information available, the commissioner shall conduct a public hearing on the proposed comprehensive master plan in the county seat of each county which contains a portion of the area covered by the comprehensive master plan, in the manner provided in chapter 14.

Subd. 3. Acquisition of land and easements. The commissioner of natural resources may acquire land, scenic easements, or other interests in land by gift, purchase, or other lawful means, and may acquire scenic easement interests in land by eminent domain. The acquisitions must be proposed for acquisition by the state by the comprehensive master plan.

Subd. 4. Rules. (a) The commissioner of natural resources shall adopt rules that establish guidelines and specify standards for local zoning ordinances applicable to the area within the boundaries covered by the comprehensive master plan.

(b) The guidelines and standards must be consistent with this section, the federal Wild and Scenic Rivers Act, and the federal Lower St. Croix River Act of 1972. The standards specified in the guidelines must include:

(1) the prohibition of new residential, commercial, or industrial uses other than those that are consistent with the above mentioned acts; and

(2) the protection of riverway lands by means of acreage, frontage, and setback requirements on development.

(c) Cities, counties, and towns lying within the areas affected by the guidelines shall adopt zoning ordinances complying with the guidelines and standards within the time schedule prescribed by the commissioner.

Subd. 5. Administration. The commissioner of natural resources in cooperation with appropriate federal authorities and authorities of the state of Wisconsin shall administer state lands and waters in conformance with this section, the federal Wild and Scenic Rivers Act, and the federal Lower St. Croix River Act of 1972.

History: *1990 c 391 art 6 s 40*

waters, harbor facilities adapted for the reception, docking, unloading and loading of vessels carrying supplies required for the operation of such utility.

(b) Place any public utility structure, including all or part of any plant for the generation of electricity and the appurtenances, upon the bed of any of the waters specified in sub. (1), provided the utility first obtains approval under this chapter and obtains the approval of the public service commission as required by s. 196.49 or rules or orders of the public service commission issued pursuant thereto, and also obtains the approval of the department to the making of any payment to be made to the municipality with respect to the erection of such structure.

(2) COMPLIANCE WITH OTHER PERMIT REQUIREMENTS. (a) Each public utility operating under a permit under this section on January 1, 1986, shall comply with s. 144.026 (2), if applicable.

(b) On and after January 1, 1986, no city, village or town may issue a permit under sub. (1) unless the public utility applying for the permit complies with s. 30.18 (2) (b), if applicable.

History: 1985 a. 60.

30.25 Wolf river protection. (1) Except as provided under sub. (2), no person may make any effort to improve the navigation on the Wolf river north of the southern boundary of Shawano county nor shall any dam be authorized for construction in that portion of the Wolf river. Any permit issued or in effect by virtue of or under authority of any order or law authorizing the construction of any dam in the Wolf river in Langlade county is void. This declaration does not affect permits for or the operation or maintenance of any dam in existence on August 24, 1963.

(2) A person may engage in a minor dredging project to improve access to or to improve the aesthetics of the Wolf river in Shawano county if a permit issued by the department under s. 30.20 authorizes the project.

History: 1987 a. 374.

30.26 Wild rivers. (1) LEGISLATIVE INTENT. In order to afford the people of this state an opportunity to enjoy natural streams, to attract out-of-state visitors and assure the well-being of our tourist industry, it is in the interest of this state to preserve some rivers in a free flowing condition and to protect them from development; and for this purpose a system of wild rivers is established, but no river shall be designated as wild without legislative act.

(2) DESIGNATION. The Pike river in Marinette county, and the Pine river and its tributary Popple river in Florence and Forest counties are designated as wild rivers and shall receive special management to assure their preservation, protection and enhancement of their natural beauty, unique recreational and other inherent values in accordance with guidelines outlined in this section.

(3) DUTIES OF DEPARTMENT. The department in connection with wild rivers shall:

(a) Provide active leadership in the development of a practical management policy.

(b) Consult other state agencies and planning commissions.

(c) Collaborate with county and town boards and local development committees or boards in producing a mutually acceptable program for the preservation, protection and enhancement of the rivers.

(d) Administer the management program.

(e) Seek the cooperation of the U.S. forest service, timber companies, county foresters and private landowners in implementing land use practices to accomplish the objectives of the management policy.

(f) Act as coordinator under this subsection.

30.27 Lower St. Croix river preservation. (1) PURPOSE. The lower St. Croix river, between the dam near St. Croix Falls and its confluence with the Mississippi river, constitutes a relatively undeveloped scenic and recreational asset. The preservation of this unique scenic and recreational asset is in the public interest and will benefit the health and welfare of the citizens of Wisconsin. The state of Wisconsin is therefore determined that the lower St. Croix river be included in the national wild and scenic rivers system under the wild and scenic rivers act, as amended, 16 USC 1271 to 1287, and the lower St. Croix river act of 1972, 16 USC 1274 (a) (9). The purpose of this section is to ensure the continued eligibility of the lower St. Croix river for inclusion in the national wild and scenic rivers system and to guarantee the protection of the wild, scenic and recreational qualities of the river for present and future generations.

(2) ZONING GUIDELINES. As soon as possible after May 7, 1974, the department shall adopt, by rule, guidelines and specific standards for local zoning ordinances which apply to the banks, bluffs and bluff tops of the lower St. Croix river. The guidelines shall designate the boundaries of the area to which they apply. In drafting such guidelines and standards, the department shall consult with appropriate officials of counties, cities, villages and towns lying within the affected area. The standards specified in the guidelines shall include, but not be limited to: a) the prohibition of new residential, commercial and industrial uses, and the issuance of building permits therefor, where such uses are inconsistent with the purposes of this section, and b) the establishment of acreage, frontage and setback requirements where compliance with such requirements will result in residential, commercial or industrial uses which are consistent with the purposes of this section. Such standards shall be consistent with but may be more restrictive than any pertinent guidelines and standards promulgated by the secretary of the interior under the wild and scenic rivers act. If it appears to the department that the purposes of this section may be thwarted or the wild, scenic or recreational values of the river adversely affected prior to the implementation of rules under this section, the department may exercise its emergency rule-making authority under s. 227.24, and such rules shall be effective and implemented and enforced under sub. (3) until permanent rules are implemented under sub. (3).

(3) IMPLEMENTATION. Counties, cities, villages and towns lying, in whole or in part, within the areas affected by the guidelines adopted under sub. (2) are empowered to and shall adopt zoning ordinances complying with the guidelines and standards adopted under sub. (2) within 30 days after their effective date. If any county, city, village or town does not adopt an ordinance within the time limit prescribed, or if the department determines that an adopted ordinance does not satisfy the requirements of the guidelines and standards, the department shall immediately adopt such an ordinance. An ordinance adopted by the department shall be of the same effect as if adopted by the county, city, village or town, and the local authorities shall administer and enforce the ordinance in the same manner as if the county, city, village or town had adopted it. No zoning ordinance so adopted may be modified nor may any variance therefrom be granted by the county, city, village or town without the written consent of the department, except nothing in this section shall be construed to prohibit a county, city, village or town from adopting an ordinance more restrictive than that adopted by the department.

History: 1973 c. 197; 1983 a. 192; 1985 a. 182 s. 57.

30.275 Scenic urban waterways. (1) LEGISLATIVE INTENT. In order to afford the people of this state an opportunity to enjoy water-based recreational activities in close proximity to urban areas, to attract out-of-state visitors and to improve the status of the state's tourist industry, it is the intent of the legislature to improve some rivers and their watersheds. For this purpose a system of scenic urban waterways is established, but no river shall be designated as a scenic urban waterway without legislative act.

(2) DESIGNATION. The following waters are designated scenic urban waterways and shall receive special management as provided under this section:

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APPENDIX D: FISH AND WILDLIFE SERVICE CONSULTATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Twin Cities Field Office
4101 East 80th Street
Bloomington, Minnesota 55425-1665

JUN - 8 2000

John Hoosterey, Project Manager
Denver Service Center
National Park Service
12795 West Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-0287

Dear Mr. Hoosterey:

This document transmits the U.S. Fish and Wildlife Service's biological opinion based on our review of the Draft Cooperative Management Plan, Environmental Impact Statement, Lower St. Croix National Scenic Riverway in the States of Minnesota and Wisconsin (Cooperative Management Plan) [(National Park Service (NSP 1999)], and its effects on threatened and endangered species, in accordance with Section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The Lower St. Croix National Scenic Riverway (Riverway) is a narrow corridor that extends from the dam at St. Croix Falls, Wisconsin for 52 miles to the confluence with the Mississippi River at Prescott, Wisconsin. The Riverway passes through a variety of land forms including a deep, narrow gorge with basalt cliffs to pristine, undeveloped riparian areas to highly-used, developed zones. The National Park Service (NPS) manages the upper 27-mile portion of the Riverway from St. Croix Falls to the area just upstream of the City of Stillwater at River Mile (RM 26). From this point the Riverway is managed jointly by the Wisconsin and Minnesota Departments of Natural Resource. Approximately 15,804 acres of land and water are in the State-administered zone.

The Riverway has one of the richest freshwater mussel communities in the world, specifically located just below the dam at St. Croix Falls. The mussel fauna of this area includes two federally endangered species - winged mapleleaf mussel (*Quadrula fragosa*) and Higgins' eye pearlymussel (*Lampsilis higginsi*). These listed species are threatened by water pollutants, sedimentation, the spread of zebra mussels, loss of habitat, direct human impacts, and aerial exposure of mussel beds caused by hydropower peaking operations.

This biological opinion is based on information provided in the Cooperative Management Plan transmitted by memorandum dated September 16, 1999, discussions and correspondence between our respective staffs; and other sources of information.

The purpose of the Cooperative Management Plan is to provide a general direction for managing the Lower St. Croix National Scenic Riverway for the next 15 to 20 years. Several alternatives describe different concepts or visions for the future. The preferred alternative, along with four other alternatives for managing land and water in the Riverway have been presented along with a no-action alternative. The preferred alternative would maintain long stretches of the lower Riverway's natural and rural landscape, while allowing limited, planned development in communities. Riverway users would continue to find opportunities to engage in a wide range of recreational experiences. Alternative A would provide for more development and more recreational activity than the preferred alternative. There would be limited impacts on natural resources in connection with residential development in the form of soil and vegetational disturbance and disruption of wildlife. Alternative B would stress maintaining the current landscape character within the Riverway boundary and maintaining the diversify of water recreational experiences as much as possible. Alternative C is the same as Alternative B, except that recreational growth would be frozen. These two alternatives would allow slightly less development in rural areas than the preferred alternative. There would again be limited impacts on natural resources such as vegetation and soil in connection with residential impacts, although the impacts would be slightly less than the preferred alternative. Alternative D would promote and restore the natural qualities of the lower Riverway. Emphasis would be placed on promoting quieter, slower, and less intrusive experiences. This alternative would allow less development in rural areas. The no-action alternative, or Alternative E would continue to allow agencies to manage the Riverway as they have in the past.

In this biological opinion, we have determined that the preferred alternative for management of the Lower St. Croix National Scenic Riverway will not jeopardize the continued existence of both winged mapleleaf and Higgins' eye. We have found that the project will result in the incidental take of the above two mussel species and have provided Reasonable and Prudent Measures that will minimize harm to these species. Habitat for Karner blue butterfly (*Lycaeides melissa samuelis*) could potentially be indirectly adversely affected along the Riverway because open savannas would be allowed to succeed into closed canopy forests and private landowners would not be encouraged to maintain savannas. However, Karner blue butterflies are not documented to occur along the Riverway. The Service concurs that the Karner blue butterfly would not be adversely affected by implementation of the Cooperative Management Plan. However, the Service encourages Riverway management agencies to continue to manage for savannas, which would allow for future potential range of Karner blue butterflies into protected savannas within the Riverway boundaries.

Status of winged mapleleaf

The Winged Mapleleaf Mussel Recovery Plan (USFWS 1997) indicates that winged mapleleaf was listed in 1991 as endangered because (1) the species has been eliminated from nearly all of its original 12-state range and at listing was known from only one population along a 13-mile segment of the St. Croix River, (2) its population was small and therefore vulnerable to catastrophic stochastic events, such as toxic spills or low water levels, (3) its reproductive success was threatened by its low population, and (4) changes in land use practices in the watershed were anticipated because the watershed is close to a growing metropolitan area. The plan recognized zebra mussels as a grave potential threat. Zebra mussels are repeatedly found on recreational boats entering the St. Croix River from the Mississippi River and the reduction of the threat of zebra mussel invasion is a priority to the Winged Mapleleaf Recovery Team (USFWS 1997).

Little is known of the details of winged mapleleaf reproduction, feeding ecology, and specific habitat requirements (USFWS 1997). The brooding period for winged mapleleaf was presumed to be late May to the middle of July (Baker 1928). Recent investigation, however, revealed the brooding period of winged mapleleaf extended from about mid-September to mid-October in the St. Croix River (Heath *et al*. 1999). Hove *et al*. 1999 have begun laboratory studies to determine the host fish species for winged mapleleaf. In 38 trials on 29 fish species and on one species of mudpuppy, no species were found to provide complete winged mapleleaf glochidial metamorphosis. Recently, two glochidia successfully were released from a channel catfish in the laboratory (Hove 2000). The host glochidial species for winged mapleleaf remains unknown.

Much research on habitat requirements of the remnant St. Croix River population has been done during the last decade. Winged mapleleaf occurs in riffles with clean gravel, sand, and rubble substrates in rivers with clear water (USFWS 1997). It was found to be most abundant in shallow areas with fast current. Hornbach *et al.* (1995a) reported winged mapleleaf occur at an average depth of 3.0 ft, ranging from 1.4 to 6.2 ft. Winged mapleleaf are associated with three mussel species, deertoe (*Truncilla truncata*), monkeyface (*Quadrula metanevra*), and fawnsfoot (*Truncilla donaciformis*) (Hornbach *et al.* 1996). Hornbach *et al.* (1995b) concludes winged mapleleaf is only found in habitats that are generally high quality habitats for other mussel species. They also found considerable variation in flow conditions where winged mapleleaf occurred. Water velocity ranged from 0.13 ft/s to 1.12 ft/s with a mean of 0.58 ft/s (Hornbach *et al.* 1995a).

Historically, winged mapleleaf was found in 34 rivers across 12 states from Ohio in the east to Kansas in the west and south to Oklahoma (USFWS 1997). There is uncertainty over its occurrence in Oklahoma due to unresolved taxonomic classification; however, it has been reported as a new state record in the Ouachita River, Arkansas (Posey *et al.* 1996). The range of winged mapleleaf has been reduced by 99%. Factors that may have contributed to its decline including predators (such as muskrat, mink, raccoons, turtles, and waterbirds), disturbances (such as illegal harvest for consumption or bait, swimming, wading, physical disturbance of substrate from recreational and commercial boating), competitors (such as interspecific competition for resources), parasites, and disease. Winged mapleleaf, due to its single, small geographically extant population in the St. Croix River is particularly vulnerable to stochastic events such as low water levels, toxic spills, or climatic episodes (USFWS 1997).

Currently, the winged mapleleaf occurs in a single population along a 12.4 mile stretch of the St. Croix River from the hydropower dam at St. Croix Falls south to Osceola, Wisconsin (Hornbach *et al.* 1998; USFWS 1997). This distribution extends from RM 44 to RM 52 of the St. Croix River (USFWS 1997).

The St. Croix River, bounded by the states of Minnesota and Wisconsin, begins in Wisconsin and flows in a southerly direction for 154 miles until it joins the Mississippi River at Prescott, Wisconsin. The river forms part of the St. Croix National Scenic Riverway, administered by the NPS, and the Lower St. Croix National Scenic Riverway, administered by the Minnesota and Wisconsin Departments of Natural Resource in partnership with the NPS. The river is very unique because is has its complete native mussel fauna of 40 species; which also includes 13 Wisconsin threatened and endangered mussels, and 17 Minnesota threatened and endangered mussels (Hornbach *et al.* 1995a).

In recent years, recruitment to this population has been low and the last large cohort recruitment was in 1987 (Heath 1999). On September 24, 1997, one gravid female was found among approximately 250 winged mapleleafs collected and examined in biweekly surveys in summer and fall of 1997. The glochidia in the female were immature, suggesting late September was the beginning of winged mapleleaf's brooding period. Winged mapleleaf would be unusual in having a September-October brooding period, for almost all other members of winged mapleleaf's subfamily brood in spring and early summer (USCOE 1999). The glochidial host fish for winged mapleleaf is unknown, but may be a member of the catfish family, based on known glochidial host fish of other *Quadrula* species (USFWS 1997).

A recent threat to winged mapleleaf comes from zebra mussels (*Dreissena polymorpha*), freshwater mussels native to the Black and Caspian Seas. Zebra mussels were introduced into Lake Erie in the late 1980s from ship ballast water discharge (Benson and Boydstun 1995). The species is now reproducing and invading North America's lakes and rivers, including the Mississippi River up to the confluence with the St. Croix River and the Twin Cities.

Status of Higgins' eye

Higgins' eye was listed as an endangered species by the Service on June 14, 1976 (Federal Register, 41 FR 24064). The major reasons for the listing of Higgins' eye were the decreases in both the abundance and range of the species. As stated in the original recovery plan [U.S. Fish and Wildlife Service (USFWS) 1983], Higgins' eye was never abundant and Coker (1919) indicated it was becoming increasingly rare around the turn of the century. The fact that there were few records of live specimens from the early 1900s until the enactment of the Endangered Species Act in 1973 was a major factor in its listing in 1976 (Hornbach 1999). A variety of factors have been listed as affecting Higgins' eye over time including commercial harvest, impoundment from the Mississippi River navigation project, channel maintenance dredging and disposal activities, changes in water quality from municipal, industrial and agricultural sources, unavailability of appropriate glochidial hosts, exotic species and disease (USFWS 1983).

The historical distribution of Higgins' eye is not known with certainty. Although nowhere abundant, it is believed to have been widely distributed, inhabiting the Upper Mississippi River

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(UMR), which includes the Mississippi River from just north of St. Louis, Missouri, to Minneapolis-St. Paul, Minnesota (Coker 1919). It was also found along several of its tributaries including the Ohio, Illinois, Sangamon, Iowa, Cedar, Wapsipinicon, Rock, Wisconsin, Black, Minnesota, and St. Croix Rivers (USFWS 1983). The range of Higgins' eye has been reduced approximately 50 percent from its historic distribution to a 302-mile reach of the UMR (Havlik 1980, Havlik 1987) and is now found only in the UMR upstream of Lock and Dam 19 at Keokuk, Iowa, in the St. Croix River between Wisconsin and Minnesota, the Wisconsin River, Wisconsin, and in the lower Rock River in Illinois (USFWS 1983). The southern-most population is believed to be pool 19 at River Mile 407 (Cawley 1984).

Higgins' eye occurs most frequently in medium to large rivers with current velocities of 0.49 to 1.51 ft/sec and in depths of 3.3 to 19.7 ft. It appears to prefer water with dissolved oxygen greater than 5 ppm and calcium carbonate levels greater than 50 ppm. The species is significantly correlated with a firm, coarse sand substrate (Hornbach *et al.* 1995a). Higgins' eye are usually found in large, stable mussel beds with relative high species and age diversity. Hornbach *et al.* (1995a) conclude Higgins' eye seems to be associated with areas of higher mussel species richness and generally higher mussel population densities.

The reproductive cycle of Higgins' eye is typical of the family Unionidae (Cummings and Mayer 1992). Males discharge sperm to the surrounding water; females obtain the sperm as they siphon water for food and respiration. Eggs are fertilized in gill sacs (marsupia) in the female; fertilized eggs are retained in the marsupia until they mature into glochidia and are released. The mantle edge near Higgins' eye's posterior end resembles a small swimming fish that attracts predator fish. Gill tissue containing glochidia protrudes between the mantle flaps. When the gill tissue is attacked by a fish, glochidia are released, thus enhancing the probability that glochidia will come into contact with a host fish. Released glochidia attach themselves to the gills of host fish. Successfully attached glochidia mature and excyst from hosts' gills as juvenile mussels; they settle to the substrate and become sedentary in the substrate, if it is suitable. The species is bradytictic (*i.e.*, a long-term breeder) retaining developing glochidia throughout the year, except for the period following glochidia release. Baker (1928) and Holland-Bartels and Waller (1988) indicate glochidia are carried in the gill marsupia through winter and released the following spring or summer.

Holland-Bartels and Waller (1988) tested 15 species of UMR fish and reported walleye (*Stizostedion vitreum*) and largemouth bass (*Micropterus salmoides*) as the most successful glochidia host fish for Higgins' eye, as determined by glochidial persistence and maturation to juvenile stage in the fish. Their study did not investigate sauger (*Stizostedion canadense*) nor smallmouth bass (*Micropterus dolomieui*). Waller (1995) considers these species also likely host fish in the UMR, particularly the sauger, whose range overlaps with Higgins' eye's more than smallmouth bass.

The Higgins' Eye Pearlymussel Recovery Team designated seven "Essential Habitat Areas" for Higgins' eye (USFWS 1983). The Essential Habitat Areas are believed to contain viable reproducing Higgins' eye populations. The Team believed recovery of the species could not be accomplished without maintaining the Essential Habitat Area populations. The seven Essential Habitat Areas are (1) the St. Croix River at Hudson, Wisconsin (River Mile 16.2 - 17.6); (2) the UMR at Whiskey Rock, at Ferryville, Wisconsin, Pool 9 (River Mile 655.8 - 658.4); (3) the UMR at Harpers Slough, Pool 10 (River Mile 639.0 - 641.4); (4) the UMR Main and East Channel at Prairie du Chien, Wisconsin, and Marquette, Iowa, Pool 10 (River Mile 633.4 - 637); (5) the UMR at McMillan Island, Pool 10 (River Mile 616.4 - 619.1); (6) the UMR at Cordova, Illinois, Pool 14 (River Mile 503.0 - 505.5); and (7) the UMR at Sylvan Slough, Quad Cities, Illinois, Pool 15 (River Mile 485.5 - 486.0). Three additional Essential Habitat Areas have been proposed by the Higgins' Eye Pearlymussel Recovery Team; the St. Croix River at Prescott, Wisconsin, and near Taylors Falls, Minnesota (Interstate Park), and the Wisconsin River near Muscoda, Wisconsin (Orion mussel assemblage) (Hornbach, 1999).

A recent threat to Higgins' eye comes from zebra mussels (*Dreissena polymorpha*), freshwater mussels native to the Black and Caspian Seas. Zebra mussels were introduced into Lake Erie in the late 1980s from ship ballast water discharge (Benson and Boydstun 1995). The species is now reproducing and invading North America's lakes and rivers, including the UMR.

Environmental Baseline

The environmental baseline is an analysis of effects of past and ongoing natural and human factors, excluding the proposed project, pertinent to the current status of the species and its habitat. The action area includes the Lower St. Croix National Scenic Riverway from the dam at St. Croix Falls, Wisconsin downstream to its confluence with the Mississippi River at Prescott, Wisconsin.

Currently winged mapleleaf and Higgins' eye are located downstream of a peaking hydropower dam located in St. Croix Falls between Minnesota and Wisconsin. The facility is owned by Northern States Power Company (NSP). NSP voluntarily releases a minimum discharge of 800 cfs from Nov. 1 through March 31 and 1600 cfs from April 1 through October 31 (Johnson 1995). Johnson (1995) stated that daily low flows during winter peaking operations subject mussels and other aquatic organisms to extreme habitat conditions and thus he recommends that a run-of-the-river flow regime be implemented to protect and restore the habitat of winged mapleleaf and Higgins' eye.

The environmental baseline for this Biological Opinion includes impacts to winged mapleleaf and Higgins' eye. Winged mapleleaf has been eliminated from 99% of its historical range and Higgins' eye has been eliminated from 50% of its historical range. Habitat modifications including land use changes, river channel modifications, and pollution were the primary factors threatened the species during its listing process (USFWS 1991). Winged mapleleaf was usually found in well-preserved large to medium-sized clear-water streams in riffles or on gravel bars.

Recreation

There is evidence that recreational boats (paddlewheel boats and smaller motorboats) may have caused significant local disturbance to mussel beds by physical disturbance of the substrate and

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by enabling boaters access to otherwise isolated mussel beds (USFWS 1997). There has also been considerable wading and swimming activity in the vicinity of the mussel beds where winged mapleleaf are known to occur. People have been observed collecting mussels at some beach sites; indiscriminate collections may have included winged mapleleafs at some locations (Whiting 2000). Native mussels may also be collected for personal use, including mussel bait. Motorboat wakes may be causing shoreline erosion, which increases sediment loads that could impact the native mussels.

Exotic Species

Of major concern to the well being of mussels in general, and winged mapleleaf and Higgins' eye in particular, was the introduction of zebra mussels into the Mississippi River. Zebra mussels have been found throughout the UMR and have the potential to kill or otherwise eliminate native mussels, including winged mapleleaf and Higgins' eye.

Adult zebra mussels attach themselves by byssal threads to hard substrates including rocks, native mussels, wood, aquatic plants, and other zebra mussels. Zebra mussels may also colonize soft substrates, such as aquatic vegetation or soft mud (Whitney *et al.* 1996). They also attach to man-made materials including fiberglass, iron, plastic, concrete, and other surfaces [U.S. Corps of Engineers (USCOE) 1992]. Male zebra mussels release sperm directly into the water to fertilize eggs released by the female zebra mussels. Large females can release up to one million eggs per season (USCOE 1992). Eggs are released when water temperatures reach 52-54 °F. Immature zebra mussels (veligers) spread via passive drift on water currents. Adults and veligers attach to boat hulls, lower power drives, trim tabs, wet compartments, containers, and submerged boat equipment.

Zebra mussels affect other mussels by competing for food and by attaching to mussels in such numbers that infested mussels cannot travel or burrow. When infested by approximately 100 or more zebra mussels, native mussels cannot open their shells to properly respire, feed, burrow, or move, nor can they close their shells for protection. Zebra mussels can build up on native mussels in such numbers that waves and currents can dislodge native mussels from the substrate. Recent observations suggest infested native mussels may remove themselves from the substrate to escape zebra mussels (Miller 1995). Any of these impacts, singly or in combination, can kill the infested mussel. Recreational and commercial water craft are the main vectors of this species throughout inland waters, while passive drift of veligers and juveniles facilitates downstream dispersal.

Zebra mussels reach a maximum length of about two inches, and hundreds of thousands can colonize a square meter. Up to 10,000 zebra mussels have been counted on a single native mussel (USCOE 1992). In Michigan's Lakes Erie and St. Clair, where zebra mussels have existed for several years, native mussel populations have been devastated, and in some areas eradicated (Mosteller and Schloesser 1991, Gillis and Mackie 1991). Gillis and Mackie (1991) found a positive correlation between large increases in the average number of zebra mussels attached to native mussel shells and a decline in live native mussel numbers in Lake St. Clair. They also found approximately 2,000 zebra mussels on a native mussel shell occluded the siphon region completely, affecting the infested mussel's ability to filter. Colonization rates of approximately 0.4 to 1.0 g of zebra mussels per g of native mussel (dry mass) were recorded in native mussels immediately before extirpation of native mussels from the Canadian side of the Detroit River (Ohnesorg *et al.* 1993).

Zebra mussels may have greater impact on some native mussel species than others, although this is not conclusive. Haag *et al.* (1993), in a test of six species, found species in the Anodontinae subfamily to be the most sensitive to zebra mussels, followed by Lampsilinae and Ambleminae. Winged mapleleaf is a member of the subfamily Ambleminae. Hunter *et al.* (1997 and references within) also found some species to be more sensitive than others. Giant floater (*Anodonta grandis*) was the most sensitive, followed by fragile papershell (*Leptodea fragilis*), fatmucket (*Lampsilis siliquoidea*), pink heelsplitter (*Potamilus alatus*), and black sandshell (*Ligumia recta*).
Zebra mussels were first discovered in Lake St. Clair in 1988 and in all the Great Lakes in 1989. The first zebra mussel collected from the Mississippi River was taken in 1991, south of La Crosse, Wisconsin (USCOE 1999). The first discovery of zebra mussels on recreational boats in the St. Croix River was in 1994. Every year since 1994, boats have been observed with zebra mussels attached. During dive surveys in 1999, 32 boats checked had zebra mussels attached (Karns 2000). At the same sampling period, 51 live zebra mussels were found in the St. Croix River. Zebra mussels have been found attached to native mussels, rip rap, rock, refuse, and bridge piers. Currently, the St. Croix River still remains uninfested by zebra mussels despite these incidents of zebra mussels on the river substrate, on native mussels, or on boats. Based on current zebra mussel densities at dewatered lock chambers, it is likely that these areas harbor reproducing zebra mussels. Lock chambers provide excellent zebra mussel habitat; Yager *et al.* (1994) estimated zebra mussel densities in lock chambers up to 68.4/m^2 and report zebra mussel densities exceeding 7,000/m^2 at locks and dams downstream of Lake Pepin. Recent examinations at Lock and Dam 5A of zebra mussel densities suggests that these areas are conducive to zebra mussel persistence (USCOE 1999).

The Wisconsin Department of Natural Resources (WIDNR) and Illinois Natural History Survey have conducted surveys of zebra mussel veligers from the mouth of the St. Croix River (Benjamin per comm 1999). In 1998, no veligers were found coming from the St. Croix River, indicating it did not support a reproducing population of zebra mussels in 1998. During August 1999, the WI DNR conducted another veliger survey in the St. Croix River and found 17 veligers in a sample taken from the mouth of the river just downstream of the railroad bridge at the City of Prescott. The veliger density was 0.189 veligers per liter with a bimodal size distribution (Benjamin per comm 1999). Few veligers, however, were found upstream of Lock and Dam 3 compared to downstream areas. Surveys by Corps and Service biologists in 1998 and 1999 confirmed the presence of significantly fewer adult zebra mussels upstream of Lock and Dam 3 (Yager 1999).

Once firmly attached, adult zebra mussels can withstand water velocity up to approximately 6 ft/sec (Claudi and Mackie 1994). They appear adapted to lotic conditions, but when the complete life history of zebra mussels is considered, its lotic (flowing water) adaptability is doubtful. Successful lotic mussels have internal fertilization, the females holding eggs in marsupial chambers in their gills, where the eggs are fertilized, and where development proceeds to the glochidial stage. The glochidia are released, attach to fish, develop, metamorphose, and drop from the fish to the river bottom. Reliance on external fertilization and planktonic larvae is not typical of mussels in lotic environments. Native mussels have possible advantages over zebra mussels in their ability to bury into the substrate: longer life span, possibly greater energy reserves, thicker shells, and reproductive strategy suited for lotic habitats. The concern for the negative effects of zebra mussels on native riverine mussels may not be fully realized, as was the case with the Asian clam (Miller and Payne 1996), but this is by no means clear.

Strayer (1991) concluded zebra mussels do not exist in rivers less than 98.4 ft wide. Lakes and run-of-river-reservoirs along large rivers are the primary habitats of zebra mussels. Hunter *et al.* (1997 and references within) showed zebra mussel settlement is restricted by water velocity. Settlement is most successful in slow-moving water (<3.9 in/s), and, within velocity refuges from even such slow-moving water. Successful colonization of smaller river systems by zebra mussels may depend in part on lakes, large pools, and impoundments along the river's course where reproducing groups of zebra mussels can establish (Hunter *et al.* 1997). Impoundments along a smaller river enhance conditions for successful zebra mussel colonization, but the overall susceptibility of such a river to heavy infestation by zebra mussels is lower than for lakes and for long, low-velocity sections of large rivers. However, S.J. Nichols (date unavailable) reported that zebra mussel adults are attracted to water current and will colonize areas with water velocities up to 6.6 ft/s. He also reported that water velocities over 6.6 ft/s discourage the settling of veligers.

Zebra mussels disperse by three natural mechanisms (water currents, birds, and other animals) and 20 human-related mechanisms (Carlton 1993; Schneider *et al.* 1998). Johnson *et al.* (1994) reported that although waterfowl can transport zebra mussels, the actual numbers of zebra mussels moved by ducks were quite low (0 to 0.25 zebra mussels/duck) and thus waterfowl do not represent a rapid means of spreading zebra mussels between bodies of water.

Human mechanisms are preponderantly important in the upstream and overland transport of zebra mussels and larvae. Carlton (1993) suggests zebra mussels on boats and other movable substrates leads to rapid "hopscotching" over suitable habitat, with "backfilling" likely to occur later. It is uncertain to what extent these introductions lead to infestation. Johnson and Carlton (1992) state: 1) the introduction of only a few zebra mussels creates a low probability that a self-sustaining population will develop, 2) repeated introductions into a water body could be required for an outbreak, 3) overland transport requiring extended survival of mussels out of water is rarely successful, and 4) it is difficult to predict when invasion will occur, despite the high likelihood of eventual zebra mussel invasion – it could require decades. Schneider *et al.* (1998) developed a transportation model for use in Illinois and found that the risk of spread of zebra mussels depends on the number of boat trips from infested waters, which in turn depends on the distance from an infested water, boat use at the site, and the position of a lake within a river system. They determined that the invasion of inland lakes and reservoirs in Illinois was predicted to occur first at areas of high boat use close to currently infested waters.

Zebra mussels have been documented to spread via divers through their gear (Kraft 1995, 1996). He found three inland lakes known to be colonized by zebra mussels in quarries frequented by divers. Kraft (1994) also reported that a 20-acre quarry, only few miles overland from Lake Michigan and frequented by divers near Racine, Wisconsin, had been infested with zebra mussels. The quarry has no public boat launch.

Native mussels vary by species and size in their susceptibility to mortality and stress from zebra mussels, but these distinctions probably do not matter at high infestations. Winged mapleleaf is rare and sparsely distributed and may, therefore, be more vulnerable to harm from high zebra mussel infestations than are more common mussel species. Potential zebra mussel affect on winged mapleleaf reproduction was addressed in winged mapleleaf population and habitat viability report (Kjos, *et al*. 1998). The report, in discussing computer simulated zebra mussel infestation, stated that the most profound risk faced by this remnant population appears to be an infestation by zebra mussels. Direct impacts on female fecundity and adult mortality of this [simulated] infestation cause affected populations to decrease rapidly toward extinction following the introduction of zebra mussels into winged mapleleaf habitat."

Summary of threats

The range of winged mapleleaf has been reduced by 99 %; the species is presently known only in the St. Croix River. In 1991, the species was listed as endangered because it had been eliminated from nearly all of its original range, its population is vulnerable to catastrophic stochastic events, its reproductive success is threatened by its low population, and changes in land use practices in the watershed are anticipated. Higgins' eye home range has been reduced by 50%; it occurs in the Mississippi, St. Croix, and other Mississippi tributaries. A peaking hydropower dam, located in St. Croix Falls between Minnesota and Wisconsin, owned and operated by NSP, is having some effects on winged mapleleaf and Higgins' eye. Recreational activities, such as tour-boating, wading, and direct handling are having minor adverse effects to winged mapleleaf and Higgins' eye. A recent threat to native mussels comes from zebra mussels, which were introduced into the Mississippi River system. Dense zebra mussel colonization on native mussels has severely impacted native mussel communities in the Mississippi River. Consequently, zebra mussels are a major concern to the well-being of winged mapleleaf and Higgins' eye.

Effects of the Proposed Action

No direct effects to winged mapleleaf or Higgins' eye will occur from implementation of the Cooperative Management Plan. Indirect effects are project impacts produced or occurring after the action has been completed or after the permitted activity terminates. They are caused by, or result from, the proposed action and are reasonable certain to occur. They may occur inside or outside the area directly affected by the proposed action. Although the major indirect effects to winged mapleleafs and Higgins' eye occurred from navigation projects occurring over the last century, continuing recreational activities may affect individuals or populations of winged mapleleaf and Higgins' eye at a local scale. As noted in the Cooperative Management Plan, the

NPS will continue to consult with the Service on future actions which may affect winged mapleleaf and Higgins' eye. Through the Section 7 process, impacts to winged mapleleaf and Higgins' eye will be avoided/minimized.

Exotic Species

The proposed Cooperative Management Plan describes the direction that the managing agencies intend to follow in managing the lower Riverway for the next 15 to 20 years. Currently, zebra mussels have not infested the St. Croix River, although they continue to be found on rock and artificial substrate at extremely low densities. However, zebra mussels continue to be brought into the St. Croix River attached to recreational boats from the Mississippi River despite Minnesota and Wisconsin state laws prohibiting the transport of zebra mussels into the St. Croix River. Overland transport of zebra mussels from infested waters, which includes the Mississippi River is also a threat to the St. Croix River.

Upstream colonization of zebra mussels in rivers depends on an upstream vector or upstream currents. The most likely potential vector for infesting the St. Croix River is recreational boat traffic. Based on a transportation model risk assessment of zebra mussel spread (Schneider *et al.* 1998), the St. Croix River may be at risk for infestation by zebra mussels. Given the above, it is likely that recreational traffic will continue to spread zebra mussels into the St. Croix River. The NPS has and will continue to maintain a boater check station at RM 30, which helps to prevent boats with zebra mussels attached from navigating any farther upstream to where winged mapleleaf mussels occur.

Exotic species infestations resulting from human introduction could impact winged mapleleaf and Higgins' eye by direct mortality and by chronic impacts. Based on the current distribution of the zebra mussel in the Mississippi River basin, it appears recreational boats have not spread zebra mussels to the degree commercial barges have. Schneider *et al.* (1998) developed a model that predicts that the risk of spread of zebra mussels depends on the number of boat trips from infested waters, which in turn depends on the distance from an infested water, boat use at the site, and the position of a lake within a river system. As previously discussed, the current spread of zebra mussels, indicate that recreational craft are responsible for some of the spread within the Mississippi River system and likely will contribute to the continuing presence of zebra mussels in the St. Croix River.

The likelihood for another exotic species invading the Mississippi River is high and the degree of impact upon the native fauna is impossible to determine, but it is probably negative. One species that could impact winged mapleleaf and Higgins' eye in the same fashion as the zebra mussel is the quagga mussel (*Dreissena bugensis*). Quagga mussels have been spread into Lakes St. Clair, Lake Ontario, and Lake Erie in a similar way to the zebra mussel. Morton (1997) predicted zebra mussels will spread to the uninfested rivers of North America having suitable water quality and substrate, the only question being how soon. Despite the expenditure of much money on research, control, and education, zebra mussels continue to spread and thrive in North American rivers and lakes.

Of major concern to the well being of mussels in general, and winged mapleleaf and Higgins' eye in particular, was the introduction of zebra mussels to the Mississippi River. Zebra mussels have been found throughout the Mississippi River, including parts of the St. Croix River and have the potential to kill or otherwise eliminate native mussels, including winged mapleleaf and Higgins' eye. Upstream colonization of zebra mussels in rivers depends on an upstream vector or upstream currents. Since there is no regular commercial barge traffic on the St. Croix River, the most likely potential vector for infesting the St. Croix River is recreational boat traffic. Based on a transportation model risk assessment of zebra mussel spread (Schneider *et al.* 1998), the St. Croix River is at some risk for infestation by zebra mussels. However, the St. Croix River has remained uninfested since 1994 by zebra mussels despite these incidents of zebra mussels on the river substrate, on native mussels, or on boats. The work of the St. Croix River Zebra Mussel Task Force agencies have been critical to helping prevent to spread of zebra mussels into the St. Croix River.

Summary of Effects

The current conservation status of winged mapleleaf and Higgins' eye is critical. As only one small population of winged mapleleaf persists in the Riverway and Higgins' eye that are uninfested by zebra mussels exist in the Riverway, both mussel species are vulnerable to adverse effects. The primary concern of the Service is continuation of the threat of zebra mussel infestation into the St. Croix River. The Cooperative Management Plan describes the direction that the managing agencies intend to follow in managing the lower Riverway. Although the primary vector (i.e. barge traffic) of zebra mussel spread will not occur in the Riverway, recreational boating traffic will continue to transport zebra mussels into the St. Croix River. This is particularly more likely in the future as zebra mussel densities continue to increase.

Conclusion

After reviewing the current status of winged mapleleaf and Higgins' eye, the environmental baseline for the action area and range of the species, the effects of the proposed action and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence and recovery of winged mapleleaf and Higgins' eye. No critical habitat has been designated for these species, therefore, none will be affected.

As explained above, the primary concern to the well being of winged mapleleaf and Higgins' eye, is the introduction of zebra mussels to the St. Croix River. Zebra mussels have been found throughout the Mississippi River, including the St. Croix River, and thus, have and will continue to threaten winged mapleleaf and Higgins' eye. However, the St. Croix River remains uninfested despite ongoing incidents of zebra mussels on the river substrate, on native mussels, and on boats. Undoubtably, zebra mussel infestation into the St. Croix River would substantially threaten the survival and recovery of winged mapleleaf and Higgins' eye.

The upstream colonization of zebra mussels in rivers depends on an upstream vector. As there is no regular commercial barge traffic on the St. Croix River, the most likely vector for zebra mussel infestation of the St. Croix River is recreational boat traffic. Although a definite factor, recreational traffic is not a major vector in the spread of zebra mussels. Furthermore, the distance between the confluence with the Mississippi River and winged mapleleaf and Higgins' eye populations in the St. Croix River, and the zebra mussel check stations greatly reduce the likelihood of zebra mussel infestation occurring in the upper St. Croix River. The steady rate of occurrence of zebra mussels into the St. Croix River relative to the Mississippi River supports this contention. Based on the above, we believe zebra mussel densities are unlikely to reach infestation levels, and thus, the Cooperative Management Plan will not appreciably reduce the likelihood of recovery and survival of winged mapleleaf or Higgins' eye.

Incidental Take Statement

Section 9 of the Act and Federal regulation pursuant to Section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such activity. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is defined as take incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Section 7(b)(4) and Section 7(o)(2), take incidental to and not an intended part of the agency action is not considered prohibited taking under the Act, provided such take is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the NPS for the exemption in Section 7(o)(2) to apply. The NPS has a continuing duty to regulate the activity covered by this incidental take statement. If the NPS fails to assume and implement the terms and conditions, the protective coverage of Section 7(o)(2) may lapse. To monitor the impact of incidental take, the NPS must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(I)(3)].

5.5.1 Level of Take

The Service anticipates that incidental take of winged mapleleaf and Higgins' eye mussel from the proposed action will be harassment and harm of winged mapleleaf and Higgins' eye from zebra mussels occurring in the St. Croix River or its tributaries, and with it the exposure of winged mapleleaf and Higgins' eye population to an increased likelihood of infestation by zebra mussels. Although commercial barge traffic does not regularly occur in the St. Croix River, recreational watercraft or other vessels entering and navigating the St. Croix River from the Mississippi River provide an upstream vector for zebra mussels. As there is a likelihood that zebra mussels will be deposited near winged mapleleaf and Higgins' eye population over the next 50 years, incidental take will occur in the form of harassment (i.e., competition for food, locomotion impairment) and harm (i.e. suffocation and starvation).

Incidental take will be difficult to detect and monitor, however. The reasons for this are as follows. First, changes to fitness parameters (e.g., decreased recruitment) often are not manifested in a year or two but rather over a period of years (e.g., 5 to 10 years). This is especially true for species that occur at low densities. Second, detection of impaired specimens is unlikely given the low abundance of winged mapleleaf and Higgins' eye. Third, the normal variance in population size may be great, due to the low densities, and thus, identifying a declining trend over a short time-frame is problematic. We believe, however, the level of take can be monitored by observing the population trend of zebra mussel densities by sampling attached adults on the substrate of the St. Croix River along with veliger sampling of the St. Croix River.

Despite probable zebra mussel occurrence in winged mapleleaf and Higgins' eye habitat, we believe population densities will not reach infestation levels as observed in the mainstem of the Mississippi River. As an indicator of incidental take, we believe that zebra mussels will not infest (i.e. persistence of zebra mussel veligers in water column along with occurrence of multiple size classes of zebra mussel adults attached to substrate of St. Croix River with densities > 10/m2) the St. Croix River upstream of the Highway 10 bridge at Prescott, Wisconsin.

In addition to impacts associated with zebra mussels, recreational boats could increase shoreline erosion thus increasing sediments in the water, waders and swimmers could unknowingly collect mussels, and poachers could adversely affect winged mapleleaf and Higgins' eye. The Service has determined that this level of [illegible]ated take is not likely to result in jeopardy to these species.

Reasonable and Prudent Measures

The measures described below are non-discretionary, and must be implemented by the agency for the exemption in Section 7(o)(2) to apply. The NPS has a continuing duty to implement the activity covered by this incidental take statement. If the NPS fails to adhere to the terms and conditions of the incidental take statement, the protective coverage of Section 7(o)(2) may lapse.

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of winged mapleleaf and Higgins' eye mussel.

1. Support the development of an action plan by the U.S. Army Corps of Engineers to monitor and control the abundance and distribution of zebra mussels on the St. Croix River.

2. Take actions to reduce the impacts of boaters, swimmers and waders on mussels in the vicinity of Wisconsin and Minnesota Interstate Parks.

3. Continue the operation and maintenance of the vessel access station on the St. Croix River upstream from the City of Stillwater to reduce the potential spread of zebra mussels.

6.5.3 Terms and Conditions

To be exempt from the prohibitions of Section 9 of the Act, the NPS must comply with the following terms and conditions which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. An action plan being developed by the Corps will include monitoring and controlling the abundance and distribution of zebra mussels on the St. Croix River. The action plan will be provided to the NPS by the Service. In developing and implementing the feasible provisions of a plan to protect live winged mapleleaf and Higgins' eye individuals from zebra mussels in the St. Croix River, the Corps will involve the NPS to determine the most efficient and cost effective combination of methods and measures.

2. The NPS will post all public access sites to inform the public about the presence of winged mapleleaf and Higgins' eye in the Interstate parks and provide literature to reduce the adverse effects of swimming, wading, and boating on winged mapleleaf and Higgins' eye.

3. The NPS will continue to restrict access to parts of the St. Croix River under NPS vessel access rules at the Arcola Sandbar Ranger Contact Station to reduce the potential spread of zebra mussels.

The Service believes the assured presence of zebra mussels in the Mississippi River results in the threat of introduction of zebra mussels into the St. Croix River. These introduced zebra mussels may establish reproducing populations in parts of the St. Croix River. As an indicator of incidental take, we believe that zebra mussels will not infest the St. Croix River upstream of the Highway 10 bridge at Prescott, Wisconsin. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

6.6 Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are activities to be conducted at your agency's discretion. They are designed to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. Implement public outreach effort, in coordination with the Service and other resource agencies, as a means to disseminate information on life history and distribution of zebra

mussels, ecological importance of native mussels including winged mapleleaf and Higgins' eye, control measures to limit the spread of zebra mussels into and within the St. Croix River and tributaries, and status of mussel conservation efforts.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the Draft Cooperative Management Plan, Environmental Impact Statement, Lower St. Croix National Scenic Riverway in the States of Minnesota and Wisconsin. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take (as minimized by the reasonable and prudent measure) is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in the manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Sincerely,

Russell D. Peter

Russell D. Peterson
Field Supervisor

cc: Elaine Rideout, National Park Service, Denver, CO
Anthony Anderson, National Park Service, St. Croix Falls, WI
Randy Thoreson, National Park Service, Stillwater, MN
Steve Johnson, Minnesota Department of Natural Resources, St. Paul, MN
Terry Moe, Wisconsin Department of Natural Resources, La Crosse, WI
Buck Malick, Minnesota Wisconsin Boundary Area Commission, Hudson, WI

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Twin Cities Field Office
4101 East 80th Street
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JUN 12 1997

Memorandum

To: Regional Director, Midwest Region, National Park Service

From: Field Supervisor, Twin Cities Field Office

Subject: Continued informal consultation on the General Management Plan/Environmental Assessment for the St. Croix National Scenic Riverway and the Cooperative Management Plan/Environmental Impact Statement for the Lower St. Croix National Scenic Riverway, Wisconsin and Minnesota

This responds to your April 1, 1997, memo requesting an updated list of federally listed species and species of concern that could be potentially affected by the General Management Plan/Environmental Assessment for the St. Croix National Scenic Riverway and the Cooperative Management Plan/Environmental Impact Statement for the Lower St. Croix National Scenic River, Wisconsin and Minnesota. We are providing the lists separated out by the two plans and counties. Note the lynx (Lynx canadensis), is newly listed as a candidate species. Thus, it is not protected by Federal law, but must be addressed during any planning initiatives.

The following is a list of Federal species located in the National Scenic Riverway area:

Wisconsin

Bayfield County

Classification	Common Name (Scientific Name)	Habitat
endangered	gray wolf (Canis lupus)	northern forest areas
threatened	bald eagle (Haliaeetus leucocephalus)	breeding
threatened	Fassett's locoweed (Oxytropis campestris chartacea)	open sandy lakeshores
candidate	lynx (Lynx canadensis)	northern forest areas

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Burnett County

endangered	gray wolf (Canis lupus)	northern forest areas
endangered	Karner blue butterfly (Lycaedis melissa samuelis)	prairie, oak savanna, and jack pine w/wild lupine
threatened	bald eagle (Haliaeetus leucocephalus)	breeding/ wintering

Douglas County

endangered	gray wolf (Canis lupus)	northern forest areas
endangered	Kirtland's warbler (Dendroica kirtlandii)	potential breeding in jack pine
endangered	piping plover (Charadrius melodus)	sandy beaches:bare alluvial and dredge spoil islands
threatened	bald eagle (Haliaeetus leucocephalus)	breeding

Polk County

endangered	peregrine falcon (Falco peregrinus)	potential breeding
endangered	Karner blue butterfly (Lycaeides melissa samuelis)	prairie, oak savanna and jack pine w/wild lupine
endangered	Higgins' eye pearly mussel (Lampsilis higginsi)	St. Croix River
endangered	winged maple leaf mussel (Quadrula fragosa)	St. Croix R.
threatened	bald eagle (Haliaeetus leucocephalus)	breeding/ wintering

Sawyer County

endangered	gray wolf (Canis lupus)	northern forest areas
threatened	bald eagle (Haliaeetus leucocephalus)	breeding
candidate	lynx (Lynx canadensis)	northern forest areas

Washburn County

endangered	gray wolf (Canis lupus)	northern forest areas
endangered	Kirtland's warbler (Dendroica kirtlandii)	potential breeding in jack pine
threatened	bald eagle (Haliaeetus leucocephalus)	breeding/ wintering

Minnesota

Chisago County

endangered	Higgins' eye pearly mussel (Lampsilis higginsi)	St. Croix R.
endangered	winged maple leaf mussel (Quadrula fragosa)	St. Croix R.
threatened	bald eagle (Haliaeetus leucocephalus)	breeding
species of concern	Blanding's turtle (Emydoidea blandingii)	
species of concern	lake sturgeon (Acipenser fulvescens)	St. Croix R.
species of concern	crystal darter (Ammocrypta asperella)	St. Croix R.
species of concern	blue sucker (Cycleptus elongatus)	St. Croix R.
species of concern	salamander mussel (Simpsonaias ambigua)	St. Croix R.
species of concern	spectacle case pearly mussel (Cumberlandia monodonta)	St. Croix R.
species of concern pools/	bog bluegrass (Poa paludigina)	shallow escarpments

Pine County

threatened	gray wolf (Canis lupus)	peripheral
threatened	bald eagle (Haliaeetus leucocephalus)	breeding

The following is an updated list of federally listed species, candidate species, and species of concern that could be potentially affected by the Cooperative Management Plan/Environmental Assessment for the Lower St. Croix National Scenic Riverway, Wisconsin and Minnesota:

Wisconsin

Pierce County

endangered	peregrine falcon (Falco peregrinus)	breeding
endangered	Higgins' eye pearly mussel (Lampsilis higginsi)	St. Croix R.
threatened	bald eagle (Haliaeetus leucocephalus)	breeding/ wintering

Polk County

endangered	peregrine falcon (Falco peregrinus)	breeding
endangered	Higgins' eye pearly mussel (Lampsilis higginsi)	St. Croix R.
endangered	winged maple leaf mussel (Quadrula fragosa)	St. Croix R.
threatened	bald eagle (Haliaeetus leucocephalus)	breeding/ wintering

St. Croix County

endangered	peregrine falcon (Falco peregrinus)	potential breeding
endangered	Karner blue butterfly (Lycaedis melissa samuelis)	prairie, oak savanna and jack pine w/wild lupine
endangered	Higgins' eye pearly mussel (Lampsilis higginsi)	St. Croix R.
threatened	bald eagle (Haliaeetus leucocephalus)	breeding/ wintering

Minnesota

Chisago County

endangered	Higgins' eye pearly mussel (*Lampsilis higginsi*)	St. Croix R.
endangered	winged maple leaf mussel (*Quadrula fragosa*)	St. Croix R.
threatened	bald eagle (*Haliaeetus leucocephalus*)	breeding
species of concern	Blanding's turtle (*Emydoidea blandingii*)	
species of concern	lake sturgeon (*Acipenser fulvescens*)	St. Croix R.
species of concern	crystal darter (*Ammocrypta asperella*)	St. Croix R.
species of concern	blue sucker (*Cycleptus elongatus*)	St. Croix R.
species of concern	salamander mussel (*Simpsonaias ambigua*)	St. Croix R.
species of concern	spectacle case pearly mussel (*Cumberlandia monodonta*)	St. Croix R.
species of concern pools/	bog bluegrass (*Poa paludigina*)	shallow escarpments

Washington County

endangered	peregrine falcon (*Falco peregrinus*)	breeding
endangered	Higgins' eye pearly mussel (*Lampsilis higginsi*)	St. Croix R.
threatened	bald eagle (*Haliaeetus leucocephalus*)	breeding/ wintering
species of concern	plains spotted skunk (*Spilogale putoris interrupta*)	
species of concern	migrant loggerhead shrike (*Lanius ludovicianus migrans*)	breeding
species of concern	cerulean warbler (*Dendroica cerulea*)	breeding
species of concern	Blanding's turtle (*Emydoidea blandingii*)	
species of concern	false map turtle (*Graptemys pseudogeographica*)	
species of concern	lake sturgeon (*Acipenser fulvescens*)	St. Croix R.

species of concern	crystal darter (Ammocrypta asperella)	St. Croix R.
species of concern	blue sucker (Cycleptus elongatus)	St. Croix R.
species of concern	elktoe mussel (Alasmidonta marginata)	St. Croix R.
species of concern	salamander mussel (Simpsonaias ambigua)	St. Croix R.
species of concern	spectacle case pearly mussel (Cumberlandia monodonta)	St. Croix R.
species of concern	elusive clubtail dragonfly (Gomphus notatus)	St. Croix R. watershed
species of concern	St. Croix snaketail dragonfly (Ophiogomphus susbecha)	St. Croix R. watershed
species of concern	extra-striped snaketail dragonfly (Ophiogomphus anomalis)	St. Croix R. watershed
species of concern	Sylvan hygrotus diving beetle (Hygrotus sylvanus)	St. Croix R. watershed
species of concern	Hill's thistle (Cirsium hillii)	prairies, savannas, open woods
species of concern	butternut (Juglans cinerea)	mesic hardwood forests
species of concern	bog bluegrass (Poa paludigina)	shallow pools/ escarpments

According to the Green Bay Field Office, there is good information available within Wisconsin on mammals, birds, herptiles, and fish. The following list of species occurs in the Wisconsin counties of the St. Croix National Scenic Riverway. Information about insects and plants is less reliable, so those species have been deleted. The Service has virtually no information available regarding the occurrences of these species within Wisconsin counties, mostly due to issues regarding confidentiality.

SPECIES OF CONCERN KNOWN FROM THE COUNTIES OF THE ST. CROIX NATIONAL SCENIC RIVERWAY

	COMMON NAME	SCIENTIFIC NAME
MAMMALS		
	Canada Lynx	Lynx canadensis
BIRDS		
	Black Tern	Chlidonias niger
	Cerulean Warbler	Dendroica cerulea
	Henslow's Sparrow	Ammodramus henslowii
	Loggerhead Shrike	Lanius ludovicianus
	Northern Goshawk	Accipiter gentilis
REPTILES		
	Blanding's Turtle	Emydoidea blandingii
FISH		
	Blue Sucker	Cycleptus elongatus
	Greater Redhorse	Moxostoma valenciennesi
	Lake Sturgeon	Acipenser fulvescens
MUSSELS		
	Elktoe	Alismodonta marginata
	Salamander Mussel	Simpsonaias ambigua
INSECTS		
	St. Croix Snaketail Dragonfly	Ophiogomphus susbehcha
	Tawny Crescent Butterfly	Phyciodes batesii
PLANTS		
	Lake Cress	Armoracia aquatica
	Algae Leaved Pondweed	Potamogeton confervoides
	Bog Bluegrass	Poa paludigena
	Butternut	Juglans cinerea
	Hill's Thistle	Cirsium hillii
	Goblin Fern	Botrychium mormo

APPENDIX E: FEDERAL & STATE LISTED SPECIES OF CONCERN AND NATURAL COMMUNITIES

Wisconsin

Cerulean Warbler, *Dendroica cerulea* (Polk Co., WI)
Lake Sturgeon, *Acinpenser fulvescens* (Polk Co., WI)
Blue Sucker, *Cycleptus elongatus* (Polk Co., WI)
Elktoe Mussel, *Alasmidonta marginata* (Polk Co., WI)
Salamander Mussel, *Simpsonaias ambiqua* (Polk Co., WI)
Spectacle Case Pearly Mussel, *Cumberlandia monodonta* (Polk Co., WI)
Snuffbox Mussel, *Epioblasma triquetra* (Polk Co., WI)
St. Croix Snaketail Dragonfly, *Ophiogomphus anomalis* (Polk Co., WI)
Prairie Fame Flower, *Talinum rugospermum* (Polk Co., WI)
Bog Bluegrass, *Poa paludigina* (Polk Co., WI)
Oregon Woodsia, *Woodsia oregana var cathcartiana* (Polk Co., WI)

Minnesota

Plains Spotted Skunk, *Spilogale putoris* (Washington Co., MN)
Migrant Loggerhead Shrike, *Lanius ludovicianus migrans* (Washington Co., MN)
Creulean Warbler, *Dendroica cerulea* (Washington Co., MN)
Blandings Turtle, *Emydoidea blandingii* (Chisago/Washington Co., MN)
False Map Turtle, *Graptemys pseudogeographica* (Washington Co., MN)
Lake Sturgeon, *Acinpenser fulvescens* (Chisago/Washington Co., MN)
Crystal Darter, *Ammocrypta asperella* (Chisago/Washington Co., MN)
Blue Sucker, *Cycleptus elongatus* (Chisago/Washington Co., MN)
Salamander Mussel, *Simpsonaias ambiqua* (Chisago/Washington Co., MN)
Spectacle Case Pearly Mussel, *Cumberlandia monodonta* (Chisago/Washington Co., MN)
Elktoe Mussel, *Alasmidonta marginata* (Washington Co., MN)
Elusive Clubtail Dragonfly, *Gomphus notatus* (Washington Co., MN)
St. Croix Snaketail Dragonfly, *Ophiogomphus susbecha* (Washington Co., MN)
Extra-striped Snaketail Dragonfly, *Ophiogomphus anomalis* (Washington Co., MN)
Sylvan Hygrotus Diving Beetle, *Hygrotus sylvanus* (Washington Co., MN)
Bog Bluegrass, *Poa paludigina* (Chisago/Washington Co., MN)
Hill's Thistle, *Cirsium hillii* (Washington Co., MN)
Butternut, *Junlans cinerea* (Washington Co., MN)
Southern brook lamprey, *Ichthyomyzon gagei* (Washington County, MN)

State Special Concern Species
Wisconsin

Prothonotary Warbler, *Protonotaria citrea* (Polk Co., WI)
Louisiana Waterthrush, *Seiurus motacilla* (Polk Co., WI)
Timber Rattlesnake, *Crotalus horridus* (Pierce Co., WI)
Lake Sturgeon, *Acipenser fulvescens* (Polk Co., WI)
American Eel, *Anguilla rostrata* (Pierce Co., WI)
Mud Darter, *Etheostoma asprigene* (St. Croix Co., WI)
Western Sand Darter, *Etheostoma clarum* (Polk/St.Croix Co., WI)
Banded Killifish, *Fundulus diaphanus* (St. Croix/Pierce Co., WI)
Weed Shiner, *Notropis texanus* (Polk/St. Croix/Pierce Co., WI)
Pugnose Minnow, *Opsopoeodus emiliae* (Polk/St. Croix Co., WI)

Elktoe Mussel, *Alasmidonta marginata* (Polk Co., WI)
Creek Heelsplitter Mussel, *Lasmigona compressa* (Polk Co., WI)
Round Pigtoe Mussel, *Pleurobema sintoxia* (Polk/St. Croix Co., WI)
Inornate Ringlet Butterfly, *Coenonympha tullia* (Polk Co., WI)
Green-faced Clubtail, *Gomphurus ventricosus/viridifrons* (Polk Co., WI)
Rapids Clubtail, *Gomphus quadricolor* (St. Croix Co., WI)
St. Croix Snaketail, *Ophiogomphus susbencha* (Polk Co., WI)
Dragon Sagewort/Wormwood, *Artemisia dracunculus* (Polk Co., WI)
Villous/Silky Prairie Clover, *Dalea villosa* (Polk/St. Croix/Pierce Co.., WI)
Climbing Fumitory, *Adlumia fungosa* (Polk Co., WI)
Dwarf Milkweed, *Asclepias ovalifolia* (Polk Co., WI)
Yellow Evening Primrose, *Calylophus serrulatus* (St. Croix Co., WI)
Arrow-headed Rattle-box, *Crotalaria sagittalis* (St. Croix/Pierce Co., WI)
Wild Licorice, *Glycyrrhiza lepidota* (St. Croix/Pierce Co., WI)
Rock Switchwort, *Minuartia dawsonensis* (Polk/St. Croix Co., WI)
Wilcox Panic Grass, *Panicum wilcoxianum (Dichanthelium wilcoxianum* (St. Croix Co., WI)
James Cristatella, *Polanisia jamesii* (St. Croix Co., WI)
Bird's-eye Primrose, *Primula mistassinica* (St. Croix Co., WI)
Pomme-de-prairie, *Psoralea esculenta* (Pierce Co., WI)
Marsh Ragwort, *Senecio congestus* (Pierce Co., WI)
Prairie Fame Flower, *Talinum rugospermum* (Polk Co., WI)
Oregon Woodsia, *Woodsia oregona var cathcartiana* (Polk Co., WI)
Short's Rockcress, *Arabis shortii* (Polk Co., WI)
Assiniboine Sedge, *Carex assiniboinensis* (Polk Co., WI)
Paper Pondshell, *Utterbackia imbecillis* (Polk Co., WI)

State Natural Communities
Wisconsin

Sterling Barrens Natural Community (Polk Co., WI)
Wolf Creek Sedge Meadow: (Polk Co., WI)
Interstate Lowland Park & Downs (Polk Co., WI)
Dalles of the St. Croix River (Polk Co., WI)
Interstate State Park (Polk Co., WI)
Peaslee and Rice Lakes (Polk Co., WI)
Philadelphia Community (Polk Co., WI)
Cedar Bend Bottoms (Polk Co., WI)
St. Croix Islands (St. Croix Co., WI)
Indianhead Scout Camp Woods (St. Croix Co., WI)
Hudson Terrace Prairie (St. Croix Co., WI)
Kinnickinnic River Gorge and Delta (Pierce Co., WI)

State Special Concern Habitat

Heron Rookery - Rice Lake (St. Croix Co., WI)

State Special Concern Species
Minnesota

Five-line Skunk, *Eumeces fasciatus* (Chisago Co., MN)
Eastern Pipistrelle, *Pipistrellus subflavus* (Washington Co., MN)
Northern Myotis, *Myotis septentrionalis* (Washington Co., MN)

Red-shouldered Hawk, *Buteo lineatus* (Chisago/Washington Co., MN)
Bald Eagle, *Haliaeetus leucocephalus* (Chisago/Washington Co., MN)
Acadian Flycatcher, *Empidonax virescens* (Chisago Co., MN)
Louisiana Waterthrush, *Seiurus motacilla* (Chisago/Washington Co., MN)
Cerulean Warbler, *Dendroica cerulea* (Washington Co., MN)
Hooded Warbler, *Wilsonia citrina* (Washington Co., MN)
Gopher Snake, *Pituophis catenifer* (Washington Co., MN)
Racer, *Coluber constrictor* (Washington Co., MN)
Lake Sturgeon, *Acipenser fulvescens* (Chisago/Washington Co., MN)
Crystal Darter, *Ammocrypta asprella* (Chisago/Washington Co., MN)
Blue Sucker, *Cycleptus elongatus* (Chisago/Washington Co., MN)
Pallid Shiner, *Notropis amnis* (Washington Co., MN)
Gilt Darter, *Percina evides* (Chisago/Washington Co., MN))
Skipjack Herring, *Alosa chrysochloris* (Washington Co., MN)
Spike Mussel, *Elliptio dilatata* (Chisago/Washington Co., MN)
Black Sandshell Mussel, *Ligumia recta* (Chisago/Washington Co., MN)
Hickorynut Mussel, *Obovaria olivaria* (Chisago/Washington Co., MN)
Creek Heelsplitter Mussel, *Lasmigona compressa* (Chisago Co., MN)
Fluted-shell Mussel, *Lasmigona costata* (Chisago/Washington Co., MN)
Stemless Tick-trefoil, *Desmodium nudiflorum* (Chisago/Washington Co., MN)
American Ginseng, *Panax quinquefolius* (Chisago/Washington Co., MN)
Smooth Softshell, *Apalone mutica* (Washington Co., MN)
Goldie's Fern, *Dryopteris goldiana* (Washington Co., MN)
White Wild Indigo, *Baptisia alba* (Washington Co., MN)
Rock Sandwort, *Minuartia dawsonensis* (Washington Co., MN)
Cattail Sedge, *Carex typhina* (Chisago/Washington Co., MN)
American Water-pennywort, *Hydrocotyle americana* (Chisago/Washington Co., MN)
Creeping Juniper, *Juniperus horizontalis* (Washington Co., MN)

State Natural Communities
Minnesota

Franconia 32 Natural Area (Chisago Co., MN)
Osceola Natural Area (Chisago Co., MN)
Franconia 10 Natural Area (Chisago Co., MN)
Interstate State Park (Chisago Co., MN)
Cedar Bend White Pines/Falls Creek State Natural Area (Washington Co., MN)
Browns Creek (Washington Co., MN)
Corries Swamp/Hardwood Creek Wildlife Management Area (Washington Co., MN)

APPENDIX F: INVENTORY OF RELATED HISTORIC SITES

[illegible]		
Cushing Hotel	MN-Washington-Afton	Listed 1/85
Marine Historic District	MN-Washington-on-St. Croix	Listed 6/74
Marine Mill Site	MN-Washington-on-St. Croix	Listed 1/70
Angel's Hill Historic District	MN-Chisago-Taylors Falls	Listed - 4/72
John Daubney House	MN-Chisago-Taylors Falls	Listed - 7/80
Franconia Historic District	MN-Chisago-Taylors Falls	Listed - 6/80
Interstate State Park CCC/WPA Rustic Style Historic District	MN-Chisago-Taylors Falls	Listed - 6/92
Interstate State Park CCC/WPA Rustic Style Campground	MN-Chisago-Taylors Falls	Listed - 6/92
Munch-Roos House	MN-Chisago-Taylors Falls	Listed - 11/70
Taylors Falls Public Library	MN-Chisago-Taylors Falls	Listed - 10/70
Chicago, Milwaukee, and St. Paul Freight House and Depot	MN-Washington-Stillwater	Listed - 7/77
Mower House and Arcola Mill Site	MN-Washington-Stillwater	Surveyed – 6/80
The St. Croix Boom Site	MN-Washington-Stillwater	NHL - 11/66
St. Croix Boom Company House and Barn	MN-Washington-Stillwater	Listed - 6/80
St. Croix Lumber Mills Power House	MN-Washington-Stillwater	Listed - 4/82
The St. Croix River Access Site (21 WA 49)	MN-Washington-Stillwater	Listed - 8/84
Soo Line High Bridge	MN-Washington-Stillwater	Listed 7/76
Stillwater Bridge	MN-Washington-Stillwater	Listed - 5/89
Stillwater Commercial Historic District	MN-Washington-Stillwater	Listed - 3/92
Stillwater State Prison Historic District	MN-Washington-Stillwater	Listed - 7/86
Minnesota State Prison (old)	MN-Washington-Stillwater	Listed - 4/82
Warden's Home - Minnesota State Prison (old)	MN-Washington-Stillwater	Listed - 12/74
Washington County Courthouse	MN-Washington-Stillwater	Listed - 8/71
Second Street Commercial Historic District	Wisconsin-St. Croix-Hudson	Listed - 10/84
John S. Moffat House	Wisconsin-St. Croix-Hudson	Listed - 7/74
William H. Phipps House	Wisconsin-St. Croix-Hudson	Listed - 6/87
The Dalles Bluff Site	Wisconsin-Polk-St. Croix Falls	Listed - 9/81
Geiger Building/Old Polk County Courthouse	Wisconsin-Polk-Osceola	Listed - 12/78
Alvah A. Heald House	Wisconsin-Polk-Osceola	Listed - 12/85
Lamar State Grade School, District No. 5 - Lamar Community Center	Wisconsin-Polk- St. Croix Falls	Listed - 3/82
Thomas Henry Thompson House	Wisconsin-Polk-St. Croix Falls	Listed - 3/84
H.S. Miller Bank/Prescott City Hall	Wisconsin-Pierce-Prescott	Listed 8/94
Daniel Smith House	Wisconsin-Pierce-Prescott	Listed 3/84

APPENDIX F: INVENTORY OF RELATED HISTORIC SITES (Continued)

[illegible]	[illegible]	[illegible]
Mitchell Jackson Farmhouse	MN – Washington - Lakeland	Listed 2/82
John Oliver House	MN – Washington - Lakeland	Listed 12/77
Pest House	MN – Washington - Stillwater	Listed 6/80
Banjamin B. Sheffield House	MN – Washington –May Twnp.	Listed 6/80
John Copas House	MN– Washington–New Scandia	Listed 7/80
Paul Munich House	MN–Chisago –Franconia Twnp	Listed 7/76
Historic Districts (all or portions in riverwy boundaries)		
Stillwater Commercial Historic District	MN – Washington – Stillwater	Established 3/92
Marine on St.Croix Historic District	MN - Washington – Marine	Established 6/74
Franconia Historic District	MN – Chisago – Franconia Twnp	Established 6/80
Angel's Hill Historic District	MN – Chisago – Taylors Falls	Established 4/72

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APPENDIX G: ZEBRA MUSSEL TASK FORCE ACTION PLAN

1998 ACTION PLAN FOR THE LOWER ST. CROIX RIVER.

March 1998

Background

The zebra mussel is a small exotic bivalve introduced into the United States in the Great Lakes region in the late 1980's. It has since rapidly spread to connected water bodies, primarily through attachment onto commercial traffic. It has also expanded into inland waters in more than six states mainly through recreational boat traffic. This exotic has been documented to kill native unionid mussels, disrupt ecosystems, possibly impact fisheries, damage municipal water supply and industrial intakes, and damage or impact boats and water recreation. There are no environmentally safe control methods once it is established in a water body.

In response to the threat of this exotic, the National Park Service (NPS) and the U.S. Fish and Wildlife Service (USFWS) formed the St. Croix River Zebra Mussel Task Force in 1992 in cooperation with other agencies. The 1993 Zebra Mussel Response Plan was the initial plan for actions to try and keep the zebra mussel from spreading into the St. Croix River. The primary focus in the first years of the Task Force was to enlist public support through voluntary boating restrictions. However, the discovery in 1994 and 1995 of boats moored in the river with attached zebra mussels resulted in the decision that voluntary actions were not sufficient to prevent movement of the mussel. The NPS enacted emergency travel restrictions for the 1995 season, preventing northbound traffic past the Arcola sandbar unless the owner met specific conditions (see Appendix A).

Since 1994, recreational boats have been discovered with attached zebra mussels during routine monitoring dives. The number of boats with attached mussels was lowest in 1994, sharply increased next year and has remained relatively constant since 1995 (Figure 1). All boats found during diving with mussels were ordered removed and cleaned by the state DNR's. The continued presence of boats with attached mussels reinforces the need for continued monitoring and enforcement of zebra mussel laws.

Despite these finds, there has been no evidence that mussels are established on fixed substrates in the river and the St. Croix is considered uninfested by the natural resource agencies. Live zebra mussels attached to substrates such as rocks, pilings, or bridge supports or zebra mussel reproduction in the river are necessary to consider designating any portion of the river as infested. Zebra mussels attached to boats do not constitute an infestation, but are one of the primary potential pathways to start an infestation in the St. Croix.

The purpose of the St. Croix Zebra Mussel Task Force is to help agencies and stakeholders prevent or slow the spread of zebra mussels into and within the St. Croix River and other waters. The Task Force tries to accomplish this by developing strategies, assessing the effectiveness of strategies that are implemented, recommending tools to use against the zebra mussel and linking agencies and stakeholders in this effort. Participants on the Task Force include: National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), Wisconsin and Minnesota Departments of Natural Resources (WDNR, MDNR), Northern States Power Company (NSP), University of Minnesota Sea Grant Program (SG), Minnesota-Wisconsin Boundary Area Commission (BAC), Macalester College, Biological Resources Division of the US Geological Survey (BRD), Coast Guard (USCG), U.S. Army Corps of Engineers (ACoE), Great Lakes Indian Fish and Wildlife Commission (GLIFWC).

1998 Action Plan

This plan is a compilation of strategies and actions proposed by the participating agencies for the 1998 season to try and accomplish the Task Force purpose. This plan does not preclude other actions by agencies or stakeholders to assist this purpose.

Strategy 1. INFORMATION AND EDUCATION

This strategy is intended to inform and educate people on this harmful exotic animal, the threats it poses to the environment, laws concerning transport of zebra mussels by boats, and what can be done to help prevent the spread of this exotic.

Actions

a. Post and maintain access signs at public access sites along the river (NPS, MDNR, WDNR)

b. Continue general exotics awareness efforts on biology, impacts and regulations through efforts including but not limited to billboards, radio spots, and literature distribution. (MDNR, USFWS, NPS, WDNR, SG)

c. Staff Minnesota Boat Show (MDNR)

d. Provide agency staff and commercial businesses along the Mississippi and St. Croix Rivers with information (such as brochures, posters, fact sheets) about the threat posed by zebra mussels and the Task Force program. (NPS, MDNR, WDNR, USFWS, SG)

e. Provide information to boating public at lock and dam areas, particularly Lock and Dam 2 and 3. (ACoE)

f. Provide information to public at river community public events (ACoE)

g. Provide information via Internet sites (www.d.umn.edu/seagr/exotic.html for zebra mussel information, www.mvp.usace.army.mil for Mississippi River information) (ACoE, SG)

h. Set up and staff booths at community events to provide information on zebra mussels and aquatic exotic species (NPS)

i. Continue to display zebra mussel and exotic species exhibits at NPS visitor centers and to present programs on zebra mussels to park visitors (NPS)

j. Distribute to schools and/or conduct winter series outreach to schools using "Aquatic Exotics" traveling trunks, and provide training for teachers for use of the trunks (NPS, SG)

Strategy 2. INSPECTIONS AND ACCESS MANAGEMENT

This strategy is intended to take management and/or regulatory actions to try and prevent the inadvertent spread of zebra mussels into the St. Croix River. The strategy also seeks to inform boaters and other recreational water users of these actions.

Actions

a. Continue permit system and boating restrictions from 1997 at the Arcola sandbar area (NPS)

b. Inspect watercraft leaving and/or entering at St. Croix and Mississippi River public access sites in Minnesota through the Watercraft Inspection Program to prevent transport of zebra mussels. (MDNR)

Strategy 3. MONITORING FOR ZEBRA MUSSELS

This strategy is intended to provide evidence of zebra mussel infestations for use in actions and management decisions.

Actions

a. Continue passive monitoring sampling for adults and settled larvae (settling plate samplers) on the St. Croix and Namekagon Rivers. (USFWS, NPS, MDNR)

b. Continue dive searches on river substrate, marinas, boats, and other possible attachment sites. (USFWS, WDNR, MDNR, BAC, NPS, GLIFWC)

c. Collect and analyze plankton tows for veligers at various sites to monitor for veliger production. (USFWS, NPS, MDNR)

Strategy 4. PREVENTION

This strategy is intended to provide options to help prevent the spread of the zebra mussel.

Actions

a. The NPS has established threshold levels in the National Park Service Integrated Pest Management Plan and will use these levels to implement increased NPS actions in the Federally managed zone above Stillwater. (NPS)

b. Enforce infested watercraft laws when zebra mussels are found on boats in the St. Croix River and pursue standardization to the extent possible (MDNR, WDNR, NPS)

c. Provide language for commercial river use permits to require clean vessels for work in the St. Croix River. (WDNR, MDNR, ACoE)

d. Based on monitoring results from Strategy 3, the Task Force will review this and all other strategies. (All Task Force Members)

Strategy 5. RESEARCH

This strategy is intended to provide information on possible environmentally safe control methods to use against zebra mussel populations.

Actions

a. Support research investigating potential control and/or remediation methods. (NPS, MDNR, WDNR, USFWS, ACoE, SG)

b. Obtain and evaluate information on possible control methods and ongoing research through research conferences, Internet access and other on-line information. (MDNR, WDNR, NPS, USFWS, ACoE, SG)

c. Conduct research and provide information on prevention methods (such as anti-fouling paints) for recreational boating public (ACoE)

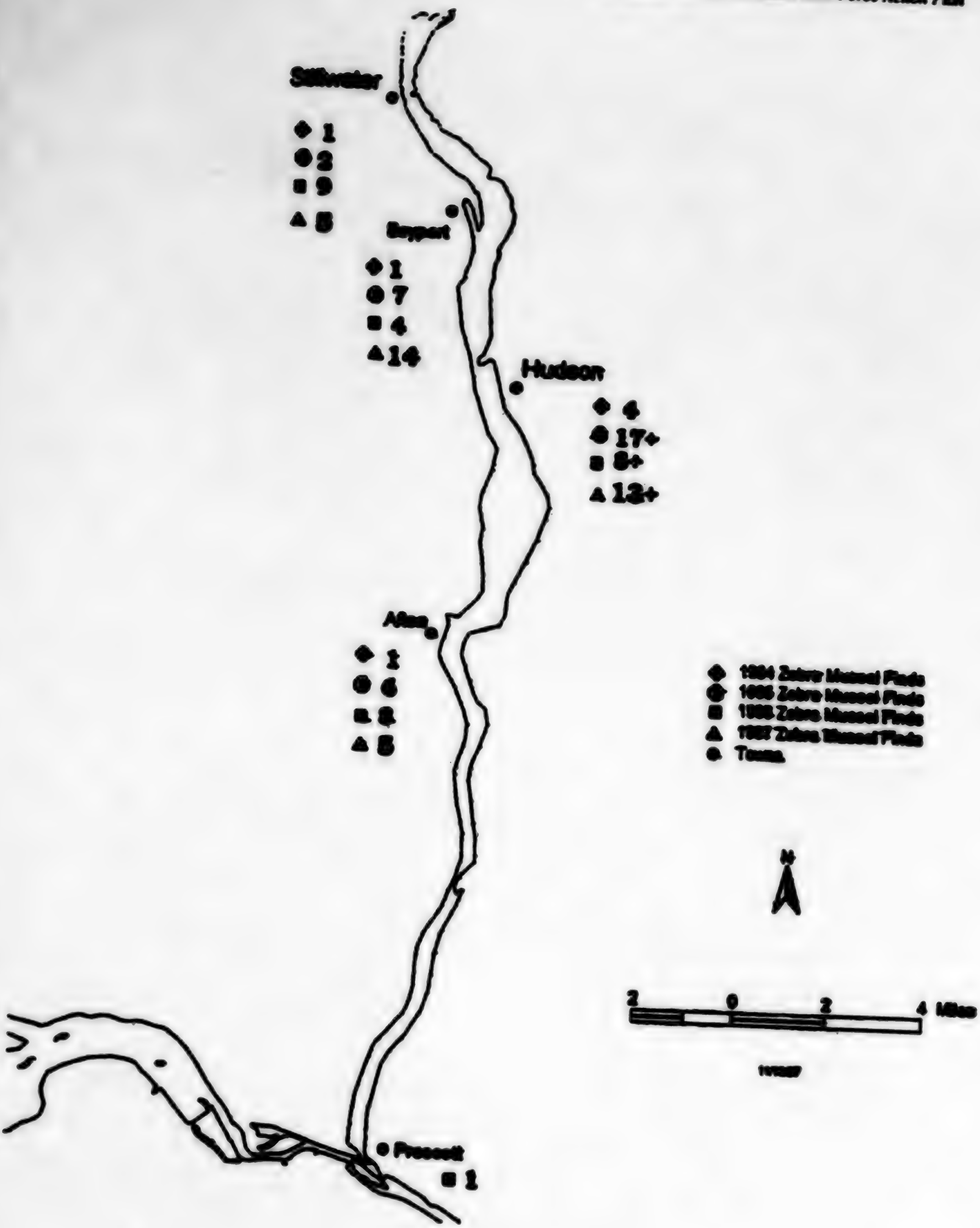

Figure 1. Confirmed zebra mussel finds by year and location on the Lower St. Croix River. (map from National Park Service)

Appendix A.

NATIONAL PARK SERVICE VESSEL ACCESS RULES
ST. CROIX NATIONAL SCENIC RIVERWAY
1997 BOATING SEASON

The National Park Service will continue to manage vessel access above the Arcola Sandbar to protect Riverway aquatic resources from the accidental introduction of the exotic Zebra mussel. Using existing regulatory authority found in the Code of Federal Regulations Title 36 Sections 1.5, 1.6 and 3.3, the National Park Service will allow access above the St. Croix River Arcola Sandbar under the following conditions.

A. The vessel is owned and operated by a riparian resident/land owner in the Federally administered zone who has been issued a permit/pass subject to the following conditions:

1. The owner/operator of the vessel is a riparian resident/land owner in the Federally administered zone of the Lower St. Croix National Scenic Riverway. Riparian resident/owner means someone owning property directly on the river, or someone who has legal, deeded access to the river.

2. The owner/operator agrees to not operate the vessel south of the Kinnickinnic Sandbar or in any infested waters, including the Mississippi River, at any time. This condition is subject to change if zebra mussels are found farther north such as Afton, Hudson or Stillwater.

3. The owner/operator agrees to not stop/anchor the vessel anywhere south of the Stillwater Lift Bridge.

4. The owner/operator checks in at the Arcola Sandbar Ranger Contact Station whenever passing the station.

5. The non-transferable permit/pass stickers are permanently fixed to both sides of the bow of the vessel in a readily visible location.

B. The owner/operator of a vessel has been issued a same-day pass at an approved inspection site. The pass will be issued subject to the following conditions:

1. If the vessel has not been operated in infested waters, the vessel must undergo one or all of the following prior to placement into uninfested waters:

   a. Remain out of the water and be protected from rain for 7 dry/warm days.

   b. Be visually inspected for attached zebra mussels.

   c. Be cleaned with a high pressure hot water wash (140+ degrees Fahrenheit).

2. If the vessel has been operated in infested water, the vessel must undergo one or all of the following prior to placement in uninfested waters:

   a. Remain out of the water and be protected from rain for at least 14 dry/warm days and be visually inspected for attached zebra mussels.

   b. Be cleaned with a high pressure hot water wash (140+ degrees Fahrenheit) and be visually inspected for attached zebra mussels.

Visual inspection and cleaning must include all areas that zebra mussels may attach or reside: hull, motor mounts, intakes, trim tabs, swim platforms, live wells(must be dry), and trailers.

This program is a continuation of the program from 1996 modified from that described in the Federal Register/Vol. 60, No. 99/Tuesday, May 23, 1995/Notices page 27327.

Vessels traveling upstream beyond the Arcola Sandbar must meet the conditions outlined above. Vessel owner/operators not conforming to the above conditions are in violation of 36 CFR sections 1.5 *Closures and Public Use Limits*, 1.6 and 3.3 *Permits* and 2.32 *Interfering with Agency Functions*.

Vessel owner/operators in violation of the above regulations, and containing zebra mussels, are in violation of 36 CFR section 2.1(a)(2) *Preservation of Natural, Cultural, and Archeological Resources*, and may be in both civil and criminal violation of 16 U. S. Code Chapter 53 *Control of Illegally Taken Fish and Wildlife* Section 3372(a) *Prohibited Acts - Offenses other than Marking Offenses*.

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